Gayana, Zool. 52 (3-4): 199-260, 1988 ISSN 0016-531X

THE AMERICAN GENERA OF ASILIDAE (DIPTERA): KEYS FOR IDENTIFICATION WITH AN ATLAS OF FEMALE SPERMATHECAE AND OTHER MORPHOLOGICAL DETAILS. II. KEY TO THE GENERA OF DASYPOGONINAE MACQUART, WITH DESCRIPTIONS OF NEW GENERA AND SPECIES AND NEW SYNONYMIES[1]

LOS GENEROS AMERICANOS DE ASILIDAE (DIPTERA): CLAVES PARA SU IDENTIFICACION CON UN ATLAS DE LAS ESPERMATECAS DE LAS HEMBRAS Y OTROS DETALLES MORFOLOGICOS. II. CLAVE PARA LOS GENEROS DE DASYPOGONINAE MACQUART, CON LA DESCRIPCION DE NUEVOS GENEROS Y ESPECIES Y NUEVAS SINONIMIAS[1]

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ABSTRACT

A key for the identification of the 35 American genera of Dasypogoninae Macquart is presented, with illustrations of the female spermathecae and other morphological details. The following new taxa are described: *Araucopogon*, gen. n. (type-species, *Dasypogon cyanogaster* Loew, 1851, from Chile); *Macrocolus martinorum*, sp. n. (typelocality: Mexico, Guerrero, Iguala); *Apolastauroides kamakusa*, gen. n., sp. n. (type-locality: Guyana, Kamakusa); *Neodiogmites carrerai*, sp. n. (type-locality: Brasil, Espirito Santo, Santa Teresa) and *Neodiogmites tauauna*, sp. n. (type-locality: Brazil, Espirito Santo, Itapina). The following new synonymies are proposed: of *Araiopogon* Carrera, 1949 and *Oberon* Carrera & Papavero, 1962, with *Saropogon* Loew, 1847; of *Caenarolia* Thomson, 1869, with *Allopogon* Schiner, 1866; of *Lastauronia* Carrera, 1949 with *Lastaurina* Curran, 1934; of *Lastaurax* Carrera, 1949 and *Lastauroides* Carrera, 1949, with *Neodiogmites* Carrera, 1949; and finally of *Lastauropsis* Carrera, 1949, with *Lastaurus* Loew, 1851.

Keywords: Insecta, Taxonomy, America, Keys, Asilidae, Dasypogoninae.

RESUMEN

Se presenta una clave para la identificación de los 35 géneros americanos de Dasypogoninae Macquart, con ilustraciones de espermatecas y otros detalles morfológicos. Los siguientes nuevos taxones son descritos: *Araucopogon*, gen. n. (especie-tipo), *Dasypogon cyanogaster* Loew, 1851, de Chile); *Macrocolus martinorum*, sp. n. (localidad-tipo: México, Guerrero, Iguala); *Apolastauroides kamakusa*, gen. n., sp. n. (localidad-tipo: Guyana, Kamakusa); *Neodiogmites carrerai*, sp. n. (localidad-tipo: Brasil, Espirito Santo, Santa Teresa) y *Neodiogmites tauauna*, sp. n. (localidad-tipo: Brasil, Espirito Santo, Itapina). Se proponen las siguientes nuevas sinonimias: de *Araiopogan* Carrera, 1949 y *Oberon* Carrera & Papavero, 1962, con *Saropogon* Loew, 1847; de *Caenarolia* Thomson, 1869, con *Allopogon* Schiner, 1866; de *Lastauronia* Carrera, 1949, con *Lastaurina* Curran, 1934; de *Lastaurax* Carrera y *Lastauroides* Carrera, 1949, con *Neodiogmites* Carrera, 1949; y finalmente la de *Lastauropsis* Carrera, 1949, con *Lastaurus* Loew, 1851.

Palabras claves: Insecta, Taxonomía, América, Claves, Asilidae, Dasypogoninae.

[1]This research was supported by the Fundação de Amparo à Pesquisa do Estado de São Paulo (Grants 85/1772-5, 86/3327-1 and 87/3170-8). Part I was published in Gayana Zool. 52 (1-2), 1988.

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INTRODUCTION

This is the part II of a series of papers intended as a preliminary effort to define the American genera of Asilidae, describing the new genera, preparatory to the elaboration of a catalogue of Neotropical species for inclusion in the forthcoming World Catalogue of Flies, now being prepared by the U.S. Department of Agriculture and U.S. National Museum of Natural History, Washington D.C.

The material used in this series belongs to the Museu de Zoologia da Universidade de São Paulo, Brasil, and to the Departamento de Zoología, Universidad de Concepción, Chile.

The methodology employed in the dissection and preservation of the male terminalia, female spermathecae and other morphological details is the same employed by Artigas (1971).

We have adopted here a classification of the Asilidae in 8 subfamilies. The classification is, as all classifications, purely artificial and designed only to facilitate identification. It follows, basically, the classification adopted by Papavero (1973), with the elevation of the Stichopogoninae to subfamily rank, and the Apocleinae Papavero are included within the Asilidae. The Leptogastrinae are herein considered as a subfamily of Asilidae. In morphology and terminology we have followed J.F. McAlpine (1981).

Our best thanks go to the Fundação de Amparo à Pesquisa do Estado de São Paulo and to the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq); without their generous support this research could not have been undertaken.

SUBFAMILY DASYPOGONINAE MACQUART

Dasypogonites Macquart 1838: 14 (1839: 130).

Key to the American tribes and genera

1. Antenna with three flagellomeres, the second minute (Figs. 4, 14, 18). Fore tibial spur weak, sigmoid (Figs. 6, 15). First tarsomere of fore leg never with basal flange. All wing cells open (Fig. 9), although sometimes cell cu*p* almost cosed at wing margin. Anatergite bare. Hypandrium free from epandrium. Female tergite 10 with spines. Tribe ISOPOGONINI G. H. Hardy 2

   Antenna with one or two flagellomeres. Other combinations of characters 11

2(1). Pulvilli present, even if reduced (in *Theromyia* Williston pulvilli one-fourth length of claws - Fig. 57) 3

   Pulvilli entirely absent 10

3(2). First tarsomere of fore leg without basal denticles (Fig. 15) (except in *Alvarenga* Carrera, with several series of peg-like structures (Figs. 6, 7), but not with denticles) 4

   First tarsomere of fore leg with a series of evident, small, black denticles basally 8

4(3). Mystax dense, occupying entire face, bristles longer at lower margin (Fig. 2) .. 5

   Mystax thin, reduced to subcranial margin, with at most sparse hairs above mystax, and decreasing in density towards base of antennae when present 6

5(4). Mesonotum strongly arched and compressed medianly, bearing a strong mane of long, dense, erect hairs. Third antennal flagellomere thin and slender. Male terminalia and aedeagus as in Figs. 23-28. Spermathecae as in Fig. 22 (Canada, USA) ..... *Comantella* Curran, 1923 (Figs. 22-28)

   Mesonotum also strongly arched, not compressed medianly and without a mane, hairs on mesonotum decumbent (Fig. 1). Third antennal flagellomere strongly flattened laterally and as wide as first flagellomere (Fig. 4). Female terminalia and

spermathecae as in Figs. 10-13 (Brazil, Argentina) ..... *Alvarenga* Carrera, 1960 (Figs. 1-13)

6(4) Male abdomen with only six visible segments, the last two (5-6) widened, flat, spatulate, covered with dense silvery pollen (Fig. 42-43), the male terminalia usually hidden beneath these segments. Wing, in both sexes, spotted brown at crossveins and bifurcations (pattern pale in male of *N. pictus*), or brown almost to apex, including bifurcation of R_4 and R_5. Male terminalia and aedeagus as in Figs. 44-48. Spermathecae as in Fig. 50 (USA s. to Ecuador) ..... *Nicocles* Jaennicke, 1867 (Figs. 42-48, 50)

Male abdomen with seven visible segments, the last two (6-7) not modified as above. Wing hyaline or basal two-thirds brown, not spotted as above, or entirely infuscated 7

7(6) Both male and female with a noticeable excision at apex of middle tibia, bearing two short spines (one longer) (Fig. 16). First tarsomere of hind leg with a row of five to nine spines of similar length. Epandrial lobes characteristically expanded, narrowed basally and then flap-like (Fig. 17). Spermathecae as in Fig. 21 (Brazil: Minas Gerais, Rio de Janeiro, São Paulo) ..... *Aspidopyga* Carrera, 1949 (Figs. 14-17, 21)

Middle tibia not excised at apex, with only two apical bristles. First tarsomere of hind leg without row of spines. Epandrial lobes never as above. Male aedeagus and terminalia as in Figs. 29-33. Spermathecae as in Figs. 34-36 (USA and Mexico s. to Ecuador, Peru, and Argentina) ..... *Cophura* Osten Sacken, 1887 (Figs. 29-36)

8(3) Anterior tarsus lengthened, twice as long as fore tibia. Face strongly produced (Brazil: Minas Gerais) ..... *Annamyia* Pritchard, 1941

Anterior tarsus of usual length. Face not as above 9

9(8) Pulvilli as long as claws. Male terminalia extremely developed (Fig. 19), aedeagus very long, exposed, longer than height of terminalia. Spermathecae as in Fig. 20 (Panama and South America, but not in Chile) .... *Aphamartania* Schiner, 1866 (Figs. 18-20)

Pulvilli reduced, one-fourth length of claws. Male terminalia also developed, but aedeagus short, hidden inside the terminalia. Male terminalia and aedeagus as in Figs. 52-56. Spermathecae: see Artigas (1971: figs. 19, 22). (Chile) ..... *Theromyia* Williston, 1891 (Figs. 52-57)

10(2) Dorsocentral bristles erect and extending to mesonotal declivity. Face with a dense fringe of long, adjacent, tectiform, drooping bristles, reaching nearly up to base of antennae. Scape and pedicel with stout, long, blunt bristles. Diameter of all femora uniform. Spermathecae as in Fig. 51 (USA: Texas, California, Washington) .... *Omninablautus* Pritchard, 1935 (Fig. 51)

Dorsocentral bristles recumbent when present, confined to mesonotal declivity. Mystax composed of hair-like bristles, never as above. Scape and pedicel without long, stiff, ventral bristles. Diameter of hind femora 1,3-1,5 times diameter of middle femora. Male terminalia and aedeagus as in Figs. 37-41. Spermathecae as in Fig. 49 (USA: Arizona, California, Colorado; Mexico: Sonora, Zacatecas) ..... *Hodophylax* James, 1933 (Figs. 37-41, 49)

11(1) Males 12

Females 18

12(11) Epandrial lobes fused into a single plate, which is fused to the hipandrium, i. e., segment 9 forms a complete ring. Antenna with one or two flagellomeres. Wing

with cells r_1, r_5, m_3 and cu*p* open or closed. Anatergite bare or pilose. Tribe MEGAPODINI Carrera 13

Epandrial lobes separated (except in *Neoderomyia* Artigas), with divergent apices, but in no case fused to hypandrium 18

13(12) Cell r_1 open. Anatergite bare, only micropubescent (if anatergite pilose, the hairs located *under* the callosity). Hypandrium short and mammiform, or prolonged tongue-like between the gonocoxites 14

Cell r_1 closed (if open, face strongly concave medianly and projected into a thick lip inferiorly). Anatergite with erect hairs. Hypandrium short and wide, strongly concave medianly 16

14(13) Second antennal flagellomere present (Fig. 59) (if absent, a minute spine on dorsum of first flagellomere present, either medianly or subapically placed. Fig. 58). Posterior margin of tergite 1 with "bullae" 15

Only one flagellomere present, with apical spine (Fig. 63). Posterior margin of tergite 1 without "bullae". Male terminalia and aedeagus as in Figs. 87-91. Spermathecae as in Fig. 96 (Guiano-Brasilian subregion) ..... *Senobasis* Macquart, 1838 (Figs. 63, 87-93, 96)

15(14) Two flagellomeres present (Fig. 59). Male terminalia and aedeagus: see Artigas (1970: Figs. 175, 176, 179, 180). Spermathecae: see Artigas (1971: Figs. 12-13) (Chile) ..... *Deromyia* Philippi, 1865 (Fig. 59)

Second flagellomere absent, a minute spine present on dorsum of first flagellomere, either medianly or subaplically placed (Fig. 58). Male terminalia and aedeagus as in Figs. 65-69. Spermathecae as in Fig. 94 (Guiano-Brazilian subregion) ..... *Cyrtophrys* Loew, 1851 (Figs. 58, 65-69, 94)

16(13) Face strongly prominent, triangular in lateral view (Fig. 60) 17

Face strongly concave, produced only inferiorly, into a very thick lip (Fig. 61). Second flagellomere absent (except in *P. martini* - Fig. 62). Male terminalia and aedeagus as in Figs. 82-86. Spermathecae as in Fig. 97 (Sonoran Desert to s. Brazil) ..... *Pseudorus* Walker, 1851 (Figs. 61, 82-86, 97)

17(16) Face extremely produced, with a central, triangular, yellow pollinose area, almost bare of hairs. Second antennal flagellomere well developed. Frons with longitudinal sulci. Legs moderately strong and robust.

Male terminalia and aedeagus as in Figs. 76-81. Spermathecae: see Artigas (1971: Fig. 72) (Peru, Chile) ..... *Pronomopsis* Hermann, 1912 (Figs. 76-81)

Face not so produced, without the pollinose central triangle. Palpi very elongate, surpassing tip of face in lateral view. Second flagellomere partially fused to first flagellomere. Frons with lateral "bullae". Male terminalia and aedeagus as in Figs. 71-75. Spermathecae as in Fig. 95 (Guiano-Brazilian subregion) ..... *Megapoda* Macquart, 1834 (Figs. 60, 70-75, 95)

18(12) Veins CuA_1 and M_3 ending separately at wing margin (i. e., cell m_3 open) (if cell m_3 closed, veins CuA_1 and M_3 meet only at wing margin). First flagellomere normally without small bristles on lower dorsal surface. Second flagellomere present or absent. Cell r_1 open. Tribe DASYPOGONINI Macquart 19

Veins CuA_1 and M_3 fused before wing margin (i. e., cell m_3 closed and petiolate) (if cell m_3 open, as in *Pseudorus piceus* /Megapodini/, then anatergite pilose). Cell r_1 open or closed. First antennal flagellomere with small bristles on lower dorsal surface (if these bristles absent /Megapodini/ then anatergite pilose) 29

19(18) Pulvilli absent (Fig. 103). Antennal stylus variable (see Wilcox, 1967: Fig. 1). Male terminalia and aedeagus as in Figs. 138-142. Spermathecae as in Fig. 143 (Nearctic) ..... *Parataracticus* Cole, 1924 (Figs. 103, 138-143)

Pulvilli present 20

20(19) Second antennal flagellomere absent. First flagellomere with an apical or dorsal spine (Fig. 98) 21

Second antennal flagellomere present (Fig. 99) 25

21(20) First flagellomere with a dorsal incision near its middle or apical third bearing a spine (Fig. 104). Abdomen notoriously punctate. Male terminalia and aedeagus as in Figs. 151-155. Spermathecae as in Fig. 156 (USA, Mexico) ..... *Taracticus* Loew, 1872 (Figs. 104, 151-156)

First flagellomere always with a minute apical spine 22

22(21) Face concave (Fig. 124) 23

Face flat (Fig. 101) 24

23(22) Scape and pedicel subequal in length. Marginal scutellar bristles present. Body pollinose. Male terminalia and aedeagus as in Figs. 105-110. Spermathecae as in Fig. 116 (Argentina) ..... *Aczelia* Carrera, 1955b (Figs. 105-110, 116)

Scape two or three times length of pedicel (Fig. 125) Marginal scutellar bristles absent (except in *M. martinorum*, sp. n.). Body bare, mostly shining. Male terminalia and aedeagus as in Figs. 126, 128-132. Spermathecae as in Fig. 127 (Mexico to s. Brazil) ..... *Macrocolus* Engel, 1930 (Figs. 124-132)

24(22) Face exceptionally high, the antennae arising near vertex (Fig. 101). Scape twice as long as pedicel. First tarsomere of fore leg without basal denticles. Marginal scutellar bristles present (Brazil: Pará) ..... *Tocantinia* Carrera, 1955a (Figs. 101)

Face short, never as above. Scape and pedicel subequal in length. First tarsomere of fore leg with basal denticles. Marginal scutellar bristles absent (Brazil: Amazonas) ..... *Austenmya* Carrera, 1955a (Fig. 98)

25(20) At least three pairs of presutural dorsocentral bristles present 26

No presutural dorsocentral bristles, or, at least, these undistinguishable from pilosity 28

26(25) Lower 2/3 of face with a pronunced haired swelling or gibbosity. Presutural dorsocentrals extremely developed, semi-erect (Western Nearctic) ..... *Lestomyia* Williston, 1889

Face plane or slightly prominent at subcranial margin. Presutural dorsocentral bristles short, recumbent (Chile) 27

27(26) Abdomen slender, as long as five times width of first tergite. No more than three pairs of well developed presutural dorsocentral bristles. Male terminalia and aedeagus as in Figs. 133-137. Spermathecae: see Artigas (1971: Fig. 18) (Chile) ..... *Neoderomyia* Artigas, 1971 (Figs. 133-137)

Abdomen as broad as mesonotum. Dorsocentral bristles reaching anterior margin of mesonotum. Male terminalia and aedeagus as in Figs. 112-115. Spermathecae as in Fig. 117 (Chile) ..... *Araucopogon*, gen. n. (Figs. 111-115, 117)

28(25) Face short, produced in lateral view and triangular, the subcranial margin wider than width of frons (Figs. 99-100). Male tergites 5-6 with a cluster of squamiform setae laterally. Male terminalia and aedeagus as in Figs. 119-123. Spermathecae as in Fig. 118 (Brazil) ..... *Cleptomyia* Carrera, 1949 (Figs. 99-100, 102, 118-123)

Face never as above. Subcranial margin subequal to width of frons or shorter. No such squamiform setae present on male tergites 5-6. Male terminalia and aedeagus as in Figs. 146-150. Spermathecae as in Figs. 144-145 (Worldwide)..... ..... *Saropogon* Loew, 1847 (Figs. 144-150)

29(18) Anatergite with erect hairs. Females with seven visible tergites. Female terminalia begins with segment 8. In males, hypandrium fused to epandrium, forming a complete ring; hypandrium short and wide, strongly concave medianly. Tribe MEGAPODINI Carrera, part. (Go back to couplet 16)

Anatergite bare. Female with eight visible tergites. Male hypandrium variable . 30

30(29) Second flagellomere present (if absent, spine placed on dorsum of first flagellomere, either medianly or subapically). In males, hypandrium fused to epandrium, forming a complete ring, and hypandrium tongue-like, prolonged between gonocoxites. Posterior margin of tergite 1 with "bullae". Cells m_3 and cu*p* closed and petionate. Tribe MEGAPODINI Carrera, part. (Go back to couplet 15)

Second flagellomere always absent, spine always on tip of first flagellomere ... 31

31(30) Only one palpal segment (Fig. 64). Female terminalia in the shape of a triangular plate, formed by segment 9, without spines (Figs. 92-93). In males, hypandrium fused to epandrium, forming a complete ring. Tribe MEGAPODINI Carrera, part. (Guiano-Brazilian subregion) ..... *Senobasis* Macquart, 1838 (Figs. 63-64, 87-93, 96)

Palpus two-segmented. Female tergite 10 with spines. In males, hypandrium free from epandrium. Tribe LASTAURINI Papavero 32

32(31) At least anepisternum and katepisternum with relatively long and dense hairs. At least tergites 2-4 with long, soft hairs laterally or posteriorly, normally forming tufts parted on the middle. Generally very hirsute flies. Dorsocentral rows either complete, all the bristles long and well developed, or dorsocentrals beginning at level of posterior margin of humeri, becoming longer towards scutellum 33

Pleura almost completely naked; if sometimes posterior margin of anepisternum with some hairs, then tergites 2-4 never with long tufts of hairs. Extremely bare flies. Dorsocentrals long and well developed only post-suturally, sometimes strongly reduced or even absent 36

33(32) First tarsomere of hind leg slender, narrower than its tibia and almost a long as or longer than tarsomeres 2-4 together (Figs. 157-158). Tergites 2-4 at least with patches of more or less long, light hairs, laterally and posteriorly 34

Tarsomeres (and also normally tibiae) inflated. First tarsomere of hind leg subequal in width to its tibia, relatively short and thick, subequal to or longer than tarsomeres 2-3 (Figs. 159-160). Normally very hirsute flies, sometimes with hair tufts only in tergites 1-4 35

34(33) Cell r_1 open. Male terminalia and aedeagus as in Figs. 186-189. Spermathecae as in Fig. 206 (Brazil) ..... *Neodiogmites* Carrera, 1949 (Figs. 157-158, 206)

Cell r_1 closed and petiolate (Guyana) ..... *Apolastauroides*, gen. n.

35(33) Dorsocentral rows complete; anterior dorsocentrals well developed. Predominantly yellow or reddish-black species, with yellow vestiture. Legs yellowish or reddish. Mystax golden-yellow. Male terminalia and aedeagus as in Figs. 178-182. Spermathecae as in Fig. 205 (Brazil, Argentina) ..... *Lastaurina* Curran, 1935 (Figs. 159, 178-189, 205).

Dorsocentral rows incomplete; anterior dorsocentrals, if present, hair-like. Predominantly black species, with predominantly black vestiture. Sometimes abdomen and mesonotum with patches of yellow or rufous hairs. Legs always black. Mystax entirely black, entirely yellow, or mixed white and black. Male terminalia and aedeagus as in Figs. 190-194. Spermathecae as in Fig. 207 (Neotropical) ..... *Lastaurus* Loew, 1851 (Figs. 160-161, 190-194, 207)

36(32) Marginal scutellar bristles present 37
Marginal scutellar bristles absent 38

37(36) Face narrower than width of an eye (Fig. 162). Pulvilli of hind leg reaching at least half length of claw (Fig. 163). Male terminalia and aedeagus as in Figs. 173-177. Spermathecae as in Figs. 197-204 (Americas) ..... *Diogmites* Loew, 1866 (Figs. 162-163, 173-177, 197-204)

Face as wide as or wider than width of an eye (Fig. 164). Pulvilli of hind leg half length of claw, or shorter, to almost absent (Fig. 165). Male aedeagus as in Figs. 166-167. Spermathecae as in Fig. 195 (Brazil, Argentina) *Allopogon* Schiner, 1866 (Figs. 164-167, 195)

38(36) Prosternum dissociated from proepisternum, separated by membranous area (Fig. 215). Very large, robust flies. Male terminalia and aedeagus as in Figs. 210-214. Spermathecae as in Fig. 208 (Brazil, Argentina) ..... *Phonicocleptes* Lynch Arribálzaga (Figs. 208-215)

Prosternum fused to proepisternum, forming a completering (Fig. 216). Medium-sized flies. Male terminalia and aedeagus as in Figs. 168-172. Spermathecae as in Fig. 196 (Neotropical) ..... *Blepharepium* Rondani, 1848 (Figs. 168-172, 196, 216)

Genus *Allopogon* Schiner
(Figs. 164-167, 195)

Allopogon Schiner, 1886: 670. Type-species, *Dasypogon vittatus* Wiedemann (orig. des.)
Caenarolia (Thomson, 1869: 470. Type-species, *longipennis* Thomson (mon.) = *equestris* (Wiedemann). *N. SYN.*
Caenorolia Williston, 1891: 74, error.

The known species of this genus can be identified as follows:

1. At least one pair (commonly 3 pairs present) of very long, developed dorsocentral bristles on posterior slope of mesonotum, as long as 2/3 at least length of marginal scutellar bristles. Pulvilli of hind leg from 1/2 to 1/3 length of claws, or extremely reduced, almost absent 2
Dorsocentrals on posterior slope of mesonotum absent or short, much shorter than length of marginal scutellar bristles. Pulvilli of hind leg from 1/2 to 1/3 length of claws 7

2(1) Pulvilli of hind leg from 1/2 to 1/3 length of claw 3
Pulvilli of hind leg almost absent 5

3(2) Face with pile from base of antennae to subcranial margin. The short pilosity of legs black. Abdominal tergites with narrow yellow hind margin and on each side a narrow longitudinal stripe, at center with a stripe of golden-yellow pollinosity .. 4
Face without hairs between mystax and base of antennae. Legs entirely covered by dense, short, thick, white hairs. Abdomen grey pollinose and as seen from above

only posterior margins of tergites intensely grey pollinose (Brazil: northeastern to southern states; Uruguay, Argentina) ..... *tessellatus* (Wiedemann)

4(3) Face thickly golden-yellow pollinose. Mystax golden. Mesonotum golden-yellow, with well defined black spots. Palpi yellow-haired. Wing slightly tinged on apical half (Brazil: Minas Gerais) ..... *necans* (Wiedemann)
Face silvery-yellowish pollinose. Mystax white. Mesonotum cinereous-yellowish pollinose, with dark spots not well defined. Palpi black-haired. Wing hyaline. Each tergite with a medium longitudinal stripe; the abdomen, as seen from above, with an apparently continuous black longitudinal stripe (Southern Brazil, Uruguay, Argentina) ..... *vittatus* (Wiedemann)

5(2) Wing more or less uniformly very light yellowish-brown or yellowish, almost hyaline 6
Wing notoriously brown on basal 1/3 or more, hyaline on apex. Male abdomen very dark brown. Female abdomen orange-red. Both male and female abdomen without silvery pollinosity on dorsum (Brazil: Mato Grosso, São Paulo; Paraguay) ..... *basalis* (Curran)

6(5) Abdomen orange-red on dorsum, tergites 1-4 with black spots laterally in female (male unknown) (Brazil: Rio de Janeiro) ..... *equestris* (Wiedemann)
Male abdomen with tergites 4-6 entirely silvery pollinose. Female abdomen with first four tergites blackish, the remainder yellowish-red (Brazil: Rio de Janeiro) ..... *argyrocinctus* (Schiner)

7(1) Palpus, palpal hairs and mystax black. Face dark brown, silvery-white pollinose. Body dark chocolate-brown. Dorsocentrals on posterior slope of mesonotum absent. Male with wing brownish on basal 1/4 or more, hyaline on remainder; abdomen entirely silvery-grey pollinose, with the exception of the first tergite. Female wing more or less uniformly very light yellowish-brown and abdomen silvery pollinose only on lateral margins of tergites (Brazil: Minas Gerais) ..... *castigans* (Walker)

Palpus, palpal hairs and mystax yellowish. Face yellow, golden-yellow pollinose. Dorsocentrals on posterior slope of mesonotum sometimes present, but much shorter than length of marginal scutellar bristles. Body brown, golden-yellow pollinose. Males and females with very light yellow wing; abdomen dark brown, almost black, on disc of tergites, their broad lateral margins golden-yellow pollinose (Brazil: São Paulo) ..... *anomalus* (Carrera)

Allopogon anomalus (Carrera), n. comb.

Diogmites anomalus Carrera, 1947: 40. Type-locality: Brazil, São Paulo, São Paulo, Ipiranga. Type, MZUSP. Refs. Carrera, 1949: 68; 1953: 186, Fig. 10 (abdomen).

In addition to the type series, we have examined one specimen from BRAZIL, *São Paulo*: Magda (Faz. São Francisco), xii. 1957 (J. Lane). Preys captured with this species are: Hymenoptera (Eumenidae, Sphecidae Ichneumonidae); Coleoptera (Scarabaeidae: *Onthophagus hirculus*; Cerambycidae: *Ancylocera cardinalis*); Diptera (Asilidae: *Atoniomyia scalarata*); Hemiptera.

Allopogon argyrocinctus (Schiner), n. comb.

Saropogon argyrocinctus Schiner, 1867: 370. Type-locality: "Brazil". Type, WIEN.

Allopogon dimidiatus Curran, 1935: 4. Type: locality: Brazil, Rio de Janeiro. Type, AMNH. Ref. - Carrera, 1949: 36 (syn.).

Caenarolia argyrocincta; Carrera, 1949: 36.

Material examined: BRAZIL, *Rio de*

Janeiro: Itatiaia, 500-1000 m, iv. 1945 (Barretto), 1 male, 1 female; Tinguá, iv. 1940, 1 male; Rio de Janeiro, xi? (H.H. Smith), paratype male of *dimidiatus*; Deodoro, x. 1955 (Zikán), 1 male. All in MZUSP.

Allopogon basalis Curran

Allopogon basalis Curran, 1935: 3. Type-locality: Brazil, Minas Gerais, Pirapora. Type, AMNH.
Caenarolia basalis; Carrera, 1949: 37.

Allopogon castigans (Walker), n. comb.

Dasypogon castigans Walker, 1851: 89. Type locality: "South America". Type, BMNH (hind tarsi missing).
Caenarolia spitzi Carrera, 1949: 39. Type-locality: Brazil, Minas Gerais, Araguari, Type. MZUSP. n. syn.
Diogmites castigans; Papavero, 1971: 20 (wrong generic assigment).

Allopogon equestris (Wiedemann), n. comb.

Dasypogon equestris Wiedemann, 1828: 392. Type-locality: "Brazil". Syntypes (5 spec.), WIEN.
Caenarolia longipennis Thompson, 1869: 471. Type-locality: Brazil, Rio de Janeiro. Type, Stockholm. n. syn.

Allopogon necans (Wiedemann)

Dasypogon necans Wiedemann, 1828: 392. Type-locality: "Brazil". Type, WIEN.
Allopogon necans; Schiner, 1866: 678.
Lochites asiloides Bigot, 1878: 426. Type-locality: "Brazil". Type, OXF. Ref. - Papavero, 1971: 20 (syn.).
Senobasis asiloides; Williston, 1891: 75 (cat.).
Blepharepium asiloides; Hull, 1962: 233.

Allopogon tessellatus (Wiedemann)

Dasypogon tessellatus Wiedemann, 1828: 390. Type-locality: Uruguay, Montevideo, Type, WIEN.
Allopogon tesselatus; Schiner, 1866: 678.
Deromyia weyenberghi Wulp, 1882: 93. Type-locality: "Argentina". Syntypes, AMST. n. syn.
Allopogon weyenberghi; Carrera, 1949: 45.

Material examined. Brazil, *Ceará*: Quixeramobim, x. 1940 (Shannon & Alves), 1 male (with *Protonectarina sylveirae* Sauss. as prey), 1 female (with *Brachygastra lecheguana* Latr. as prey), and 1 male and 1 female (with *Polybia ignobilis* Hal); 1 female without prey; *Rio Grande do Norte*: Natal, iii. 1939 (Alves), 2 males; *Pernambuco*: Base da Serra Negra, v. 1960 (Machado), 1 male; *Espírito Santo*: Córrego Itá, x. 1954 (Zikán), 3 males, 1 female; *Rio Grande do Sul*: no data, 1 male; Pelotas, i. 1956, ii. 1963, xii. 1964, i. 1965 (Biezanko), 5 males, 1 female; Santa Maria, 1926 (Ronna), 1 female.

Uruguay: Paysandú, iii. 1953 (Malinolo), 1 male.

Argentina: La Rioja, ii. 1958 (no coll.), 2 females; *Tucumán*: Forestal, iv. 1948 (Arias), 1 male.

All in MZUSP.

Allopogon vittatus (Wiedemann)

Dasypogon vittatus Wiedemann, 1828; 389. Type-locality: Uruguay, Montevideo, Type, WIEN.
Allopogon vittatus; Schiner, 1866: 678.
Dasypogon longiungulatus Macquart, 1838: 36 (1839: 152). Type-locality: "Brésil, Missions" (=western part of the State of Rio Grande do Sul). Type, MNHN (as *longiunguiculatus* (sic) in Museum's catalogue of types!).
Dasypogon annulitarsis Rondani, 1868: 9. Type-locality: Argentina, Santa Fe, Córdoba, Rio Cuarto and Rosario. Syntypes? NAPLES.
Dasypogon gracilis Bigot, 1878: 418. Type-locality: Uruguay, Montevideo. Syntypes, OXF.

Material examined. Brazil, *Santa Catarina*: Três Barras, vi. 1949 (Carvalho), 1 female; *Rio Grande do Sul*: Pelotas, ii. 1963 (Biezanko), 1 male (with Lepidoptera as prey).

Uruguay: *Treinta y Tres*: Arroyo Avestruz, iii. 1959 (Scravice), 1 female; *Florida*: ii. 1954 (no col..), 2 males, 1 female; Rio Yi, iii. 1959 (Monné), 1 female; *Rivadavia*: C. Batovi, iv. 1954 (Silveira & Carbonell), 1 female.

Argentina: *Buenos Aires*: no data (Bosq), 2 males, 2 females; Sierra Ventana (Dirings), 2 females; Flores, iii. 1912, 2 females; San Isidro, ii. 1952 (Foerster), 1 female; Tandil, 200-

250 m, xii. 1949, 2 females; xi-xii. 1951 (Foerster), 2 females; ii. 1954 (Dirings), 2 males; Zelaya, xii. 1946 (Hepper), 1 male, 3 females.

All in MZUSP.

Genus *Apolastauroides*, gen. n.

Face 1/5 total width of head, wider at subcranial margin, narrower above, below antennae, due to an expansion of the eyes, nearly flat, scarcely prominent in profile, slightly bulging at subcranial margin and concave at middle. Mystax with some 10 relatively short bristles, in a singles row, restricted to subcranial margin. Subcranial cavity strongly oblique, almost as long as face. Palpus two-segmented. Proboscis longer than height of an eye, slender, with median dorsal keel occupying its apical 3/4, with long ventro-basal hairs. Scape and pedicel subequal in length, with short bristles both on dorsal and ventral margins; first flagellomere spindle-shaped, 1.2 times combined length of scape and pedicel. Frons with divergent sides and short, strong bristles laterally. Ocellar tubercle with 3 pairs of bristles. Occiput nearly flat, pollinose, with orbital and superior bristles strongs.

Pronotum with long, fine hairs and strong bristles. Mesonotum moderately convex; 3-4 humerals, 3 prealars, 3 supraalars and 3-4 postalars, long and strong. Dorsocentral row beginning at level of posterior margin of humeri, the bristles becoming longer towards scutellum; in addition, moderately bristly hairs as long as scape, more numerous on anterior and lateral margins of mesonotum. Scutellum flat, pollinose, with 2 pairs of apical bristles. Katatergite with micropubescent callosities. Pleura pollinose, anepisternum and katepisternum with long and slender bristles and hairs.

Legs: coxae pollinose, the fore and middle pairs with strong and dense hairs and bristles; femora and tibiae moderately thick; pilosity moderate and long; tibial bristles long and slender.

Wing: cell r_1 closed and petiolate (unique case among the Dasypogoninae!); cell m_3 closed and petiolate; cell cup closed at wing margin. Ambient vein complete.

Abdomen: tergite 1 with strong lateral bristles and patch of erect hairs. Tergites 2-7 with soft, recumbent pile lateroposteriorly, pollinose on lateroposterior margins; venter with long, sparse, erect, fine hairs.

Type-species: *Apolastauroides kamakusa*, sp. n.

Apolastauroides kamakusa, sp. n.

Male. Body length, 13 mm; wing length, 9 mm

Face and frons yellow pollinose; occiput more or less sparsely silvery-grey pollinose. Mystax yellow. Proboscis black, with yellow hairs below. Palpi black with black bristles. Scape and pedicel brown, with black bristles. First flagellomere black. Beard yellowish-white. Orbital, superior and frontal bristles black.

Thorax black. Humeri and postalar calli reddish-brown. Mesonotum black, lateral margins densely yellow-grey pollinose; two more or less wide longitudinal pollinose stripes along dorsocentral row divide the black ground color of the mesonotum into 3 longitudinal spots; hairs and bristles black. Pleura yellow-grey pollinose; hairs yellow. Anatergite with yellow hairs and black bristles. Scutellum yellow-grey pollinose. Katatergite subshining black, callosities greyish micropubescent.

Wing light yellowish-brown, sparsely microvillose; veins brown. Halteres orange-brown.

Legs: coxae black, yellow-grey pollinose, bristles and hairs yellow; femora yellowish-brown ventrally, dark brown above, in variable extensions; fore and middle tibiae very dark brown, becoming lighter, yellowish-brown, on basal half or more of posteroventral surface; hind tibiae entirely very dark brown; all tarsi very dark brown to blackish, pulvilli yellowish-brown; claws black; pilosity yellow and black, dense; short pilosity of posterior surface of tibiae and ventral surface of tarsi yellow; bristles long and black.

Abdomen black, narrow hind margin of tergites dark reddish-brown; pilosity long, fine, yellow; terminalia black, with black bristles and yellowish hairs.

Holotype male, Guyana: Kamakusa, no date (H. Lang), in MZUSP.

Genus Araucopogon, gen. n.
(Figs. 111-115, 117)

Face in frontal view slightly narrower than width of an eye and subequal in height and width; at subcranial margin slightly wider than width of frons. Face in lateral view flat to subconcave. Mystax reduced to subcranial margin, with 5-7 rows of strong bristles, the lower ones reaching tip of proboscis. Frons with numerous lateral bristles. Ocellar bristles long, anterior ones proclinate, the others divaricate. Antennae implanted at level of upper third of eye, scape longer than pedicel, both with bristles, the former with bristles similar to those on frons. First flagellomere long, longer than combined length of scape and pedicel, subcompressed, dorsal and ventral margins parallel; second flagellomere short, depressed, 1/8 lenght of first, excavated at apex with a minute apical spine. Proboscis subcylindrical, attenuate towards apex, with dorsal keel which does not reach the tip; proboscis shorter than antenna.Palpus two-segmented.

Prosternum free from proepisternum. Mesonotum nearly flattened. Dorsocentral bristles extending to anterior slope of mesonotum, reclinate. Most of mesonotal disc glabrous. Disc of scutellum bare, 4 pairs of marginal bristles. Anepisternum bare, katepisternum with strong, long bristles.

Legs with front tibial spur well developed and a group of denticles on basal ventral area of fore basitarsus. Front and middle tibiae similar. Fore basitarsus longer than middle basitarsus. Claws acute. Pulvilli reach tip of claws.

Wing: cell r_1 open, m_3 open, cu*p* narrowly open at wing margin.

Abdomen as wide as mesonotum, metallic, tapering towards apex, with 7 visible tergites in male and 8 in females. Male terminalia (Figs. 112-115) rotated 40-90°; hypandrium triangular, free from epandrium, epandrial lobes separated, with divergent tips; aedeagus straight, with small dorsal and a single, longer, ventral process at apex and dorsal margins conspicuously toothed, with two preapical ventral denticles, one at each side. Female terminalia with spines. Spermathecae with a short common duct (Fig. 117), expulsory duct with a crown of hard spine-like processes at base, valvules incospicuous, capsular ducts fine, soft, filiform, the terminal 1/3 forming a hard spiral with three whorls, the tips gently enlarged.

Length: 8-12 mm.

Type-species: *Dasypogon (Saropogon) cyanogaster* Loew, 1851 (from Chile).

Genus *Lastaurina* Curran
(Figs. 159, 178-182, 205)

Lastaurina Curran, 1934 a: 171. Type-species. *Dasypogon ardens* Wiedemann (Curran, 1935: 5).
Lastauronia Carrera, 1949: 104. Type-species, *travassosi* Carrera (orig. des.). n. syn.

The three species included herein may be identified as follows:

1. Entirely black and yellow species, with more or less dense yellow pilosity. Legs yellowish 2
   Thorax and abdomen dark orange-red, with black spots.
   Legs orange-red (Brazil: São Paulo) ..... *travassosi* (Carrera)
2(1). Mystax restricted to oral margin, recumbent, tectiform; no hairs between mystax and antennae. Moderately pilose species (Brazil: Espírito Santo, Rio de Janeiro) ..... *biezankoi* (Carrera & Papavero).
   Mystax sparse, long, emerging from dense, bushy pilosity which almost completely covers the face. Extremely pilose flies, pile very dense, long, semierect (Brazil: Mato Grosso to Rio de Janeiro, south to Argentina: Buenos Aires) ..... *ardens* (Wiedemann)

Lastaurina ardens (Wiedemann)

Dasypogon ardens Wiedemann, 1828: 391. Type-locality: "Brazil". Type, BERLIN.
Lastaurus ardens; Schiner, 1866: 678.
Lastaurina ardens; Curran, 1935: 5.

Material examined. BRAZIL, *São Paulo*: São Bernardo, iii.1927 (Spitz), 1 female; São Caetano, iii.1926 (Spitz), 1 female; *Mato Grosso*: Fazenda Murtinho, xii.1929 (Spitz), 1 male, 1 female; *Paraná*: Ponta Grossa, i.1944 (Hatschbach), 1 male; *Rio Grande do Sul*: Guarani, i.1932 (Biezanko), 1 female; Pelotas, iv.1956, iii.1961 (Biezanko), 1 male, 1 female.

Argentina, *Buenos Aires*: no data (Bosq), 1 female; Tandil, 200 m, xi-xii.1951 (Foerster), 1 male; do., 250 m, ii.1954 (Dirings), 2 males, 1 female; Puente Alsina, i.1914, 1 female.

All in MZUSP.

Lastaurina biezankoi (Carrera & Papavero), n. comb.

Lastauropsis biezankoi Carrera & Papavero, 1962: 50. Type-locality: Brazil, Rio de Janeiro, Duque de Caxias, São Bento. Type, MZUSP.

In addition to the type, we have examined two more specimens, from BRAZIL, *Espírito Santo*: Guarapari, ix.1960 (Alvarenga), 1female; *Rio de Janeiro*: Guarayiba, i. 1956 (Guimarães), 1 male.

Lastaurina travassosi (Carrera), n. comb.

Lastauronia travassosi Carrera, 1949: 105. Type-locality: Brazil, São Paulo, São Paulo. Type. MZUSP.

Genus Lastaurus Loew
(Figs. 160-161, 190-194, 207)

Dasypogon, subg. *Lastaurus* Loew, 1851: 11. Type. species, *anthracinus* Loew (orig. des.) = *lugubris* (Macquart).
Morimna Walker, 1851: 104. Type-species, *mallophorides* Walker (mon.) = *fallax* (Macquart).
Lastauropsis Carrera, 1949: 107. Type-species, *villosus* Carrera (orig. des.). n. syn.

The following species belong here:
alticola Carrera & Machado-Allison, 1968: 500. Type-locality: Bolivia, Cochabamba, Tiraque, 3.200 m. Type, BASEL (the female, from Argentina, Jujuy, does not belong to this species).
crassitarsis (Macquart), 1838: 36 (1839: 152) (*Dasypogon*). Type-locality: "Brazil". Type, MNHN. n. comb.
atratus Bigot, 1878: 415 (*Diogmites*). Type-locality: "Brazil". Type, OXF.
fallax (Macquart), 1846: 191 (1846: 63), pl. 7, fig. 5 (habitus) (*Dasypogon*). Type-locality: "Nouvelle Grenade". Type, OXF.
bombimorpha Rondani, 1850: 368/ *Dasipogon* (sic)/. Type-locality: "America Equatoriale". Type lost.
mutabilis Loew, 1851: 12. Type-locality: "Colombia". Type, BERLIN.
mallophorides Walker, 1851: 104, pl. 6, fig. 2 (habitus), 22 (head) (*Morimna*). Type-locality: "Colombia". Type, BMNH.
mallophoroides, error or emend.
flavipellitus Enderlein, 1914: 173 (as var.). Type-locality: Ecuador, Balzapamba, Santa Inez and Baños. Syntypes?
lugubris (Macquart), 1846: 192 (1846: 64) (*Dasypogon*). Type-locality: "Nouvelle Grenade". Type?
anthracinus Loew, 1851: 12 (*Dasypogon*). Type-locality: "Mexico". Type, BERLIN.
robustus Carrera, 1949: 93, figs. 24 (habitus), 57 (head), 103 (palpus), 67 (antenna). Type-locality: Brazil, Minas Gerais, Araguari. Type, MZUSP.
tricolor Carrera & Machado-Allison, 1968: 497. Type-locality: Argentina, Tucumán, Araoz. Type, IML.
villosus (Carrera), 1949: 108, figs. 28 (habitus), 54 (head), 107 (palpus), 77 (antenna) (*Lastauropsis*). Type-locality: Brazil, Paraná, Rio Negro. Type, MZUSP. n. comb.

This genus needs a future revision, based on more extensive collections. Carrera & Machado-Allison (1968) published on this genus, but misidentified most species and associated erroneously males and females. Three species-groups seem to exist:

1. A group characterized by the completely black mystax, ranging from Mexico to Bolivia and Argentina, along the Andes: *fallax*, *alticola*, *lugubris*, and probably a new species (misidentified as mallophorides by Carrera & Machado-Allison):

2. A group with mixed white and black bristles; a relatively bare species for this genus: *crassitarsis*, restricted to southeastern and southern Brazil.
3. A group with entirely yellow mystax, ranging from southeastern and southern Brazil to northern Argentina and Bolivia: *robustus*, *tricolor*, and *villosus*, and a probable new species (misidentified as the female of *alticola* by Carrera & Machado-Allison).

We have accepted, for convenience, the synonymies and distributions offered by Carrera & Machado-Allison, until a revisión clarifies the situation of this genus.

Genus Macrocolus Engel
(Figs. 124-132)

Macrocolus Engel, 1930: 470. Type-species, *bicolor* Engel (orig. des., as gen. n., sp. n.).

The 4 known species can be thus distinguished:

1. Wing entirely infuscated. All legs black 2
   Wing infuscated only in certain areas. Legs mostly reddish 3
2(1). Mystax black. Scape elongated. Thorax mostly reddish (Brazil: São Paulo; Bolivia, Paraguay) ..... *bicolor* Engel
   Mystax white. Scape subequal to pedicel. Thorax black (Mexico: Guerrero) ... . *martinorum*, sp. n.
3(1). Wing infuscated along vein of basal 3/4, apex clear. Fore and middle legs reddish, hind legs darker (Brazil: Minas Gerais)..... *barrettoi* Carrera
   Wing slightly infuscated only at vertex and hind margin. All legs reddish, the black tarsi excepted (Brazil: São Paulo)..... *rubripes* Carrera & Papavero

Macrocolus martinorum, sp. n.

Total length: 9 mm; wing length: 7 mm.

Male. Face with silvery pile at sides, center shining black to base of antennae; frons and ocellarium partly covered with silvery micropilosity, frontal hairs and bristles black. Mystax reduced to 1-2 files of straight, strong, white bristles directed forward. Antennae black, with scattered silvery micropilosity; scape slightly longer than pedicel, both with strong hairs and bristles, longer on ventral side; first flagellomere compressed, with a preapical cavity on dorsum bearing a small spine in its interior; only four small hairs on dorsum of basal fifth of first flagellomere. Postocular area with scarce and weak white hairs and bristles. Beard and proximal part of proboscis with scattered white and fine hairs. Palpi black, with black bristles.

Prothorax black, covered with silvery micropilosity, except for the anterior border, which is shining black; hairs and bristles white. Proepisternum free, with silvery micropilosity, the central line dark. Mesonotum black, mostly covered by silvery micropilosity; dorsocentral bristles black, short, but complete from the anterior border of mesonotum. Humeral bristle absent. Supraalar, postalar and posterior callosity bristles strong, white. Scutellum black, mostly covered by silvery micropilosity, whithout marginal bristles. Postscutellum glabrous. Anatergite with dense silvery micropilosity, katatergite with long and strong white bristles. Anepisternum shining black, glabrous in central area, borders with silvery micropilosity.

Wings longer than abdomen, brownish fumose, veins darker.

Legs shining black, with black hairs and bristles; coxae mostly covered by silvery micropilosity and with white hairs.

Abdomen black, shining, hairs scattered, short, fine and whitish. Posterior margin of tergites 2-6 white, more intensely so on tergites 2 and 3. Terminalia shining black, rotated 90°, with short black hairs, except on cerci, where hairs are white. Epandrial lobes separated, as long as gonopods; hypandrium globose (Fig. 126).

Female: Similar to male, but legs brownish and tergites 2-6 mostly shining orange-red, tergites 7-8 shining black; spines on tergite 10 black.

Holotype male from Mexico, *Guerrero*, 24

mi. s. Iguala, 18.vii.1963 (F.D. Parker, L.A. Stange) and paratype female from Mexico, *Guerrero*, 32 mi. n. Chapulpancingo Hy., Km. 225, 19. ix. 1960 (C.H. Martin), in MZUSP.

This species is dedicated to the late Prof. Dr. C.H. Martin and his wife.

Genus *Neodiogmites* Carrera

(Figs. 157-158, 183, 189 y 206)

Neodiogmites Carrera, 1949: 85. Type-species, *Dasypogon melanogaster* Wiedemann (orig. des).
Lastauroides Carrera, 1949: 94. Type-species, *alexanderi* Carrera (orig. des.).
Lastaurax Carrera, 1949: 109. Type-species, *lanei* Carrera (orig. des.).

The 10 species included here may be identified with the following key:

1. Large and robust species (total length, 32-37 mm; wing length 22-28 mm)..... 2
   Medium-sized species (total length, 13-19 mm; wing length, 10-15 mm) 4

2(1). Face, pedicel and flagellomere, thorax and legs brown. Face yellowish pollinose, mystax yellow, some bristles brownish-black. Palpal hairs yellow, bristles yellow and black. Beard white. Abdomen black, with fine and soft fringe of long white hairs on tergites 1-4. Wing yellowish-brown, lighter in the interior of some cells (Brazil: Rio de Janeiro to Paraná, westh to Argentina: Misiones). ..... *melanogaster* (Wiedemann)
   Entirely velvety-black species 3

3(2). Wing yellow, especially along veins, extreme apex dark brown fumose. Beard mixed black and white. Bristles and hairs of coxae pure white (Brazil: Espírito Santo) ..... *carrerai*, sp. n.
   Wing entirely blackened by microvilli. Beard yellowish. Bristles and hairs of coxae yellow (Brazil: Bahia) ..... *tenebrosus* Carrera

4(1). Bristles of mystax entirely black 5
   Bristles of mystax mixed yellow and black, or entirely golden-yellow 8

5(4). Legs entirely black 6
   Legs at least in part reddish 7

6(5). Wing more or less uniformly microvillose. Face golden tomentose. Beard blackish in males, white in females ("*albomarginatus*" Carrera is a female with blackened beard, probably a variation). Thorax black, cinereous pollinose. Mesonotum with three longitudinal black spots, the lateral two incompletely divided by transverse suture (Brazil: Rio de Janeiro, São Paulo) ..... *niger* (Carrera)
   Wing rufous on basal 2/3; apex, almost all of the fourth posterior and the entire fifth posterior cells blackish (Brazil: western São Paulo) ..... *atriapex* (Carrera & Papavero)

7(5). Parted pile on tergites 2-4 pure white. (Brazil: Minas Gerais, Rio de Janeiro, São Paulo) ..... *alexanderi* (Carrera)
   Parted pile on tergites 2-4 intensely yellow. (Brazil: Rio de Janeiro, São Paulo) . ..... *hirtuosus* (Wiedemann)

8(4). Bristles of mystax mixed yellow and black, Predominantly black species, legs reddish, tarsi reddish or blackish. (Brazil: São Paulo). ..... *mixtus* (Carrera)
   Bristles of mystax entirely golden-yellow. Predominantly black and yellow species, legs yellow 9

9(8). Flagellomere twice as long as combined length of scape and pedicel. Wing yellowish basally and anteriorly, apical 1/3 and hind margin blackish microvillose (Brazil: Espírito Santo). ..... *tauauna*, sp. n.
   Flagellomere very long and slender, almost 3 times combined length of scape and pedicel. Wing uniformly yellowish (Brazil: Rio de Janeiro) .. .. *lanei* (Carrera)

***Neodiogmites alexanderi* (Carrera), n. comb.**

Lastauroides alexanderi Carrera, 1949: 95. Type-locality: Brazil, Rio de Janeiro, Angra dos Reis (Juçaral). Type, MNRJ.

Carrera (1949) separated this species from *hirtuosus* (Wiedemann) based on the color of the abdominal hairs and the color of the legs; these presente a great variation in the extension of black areas: the femora can be entirely black in certain specimens; the males dissected always had the same terminalia. This species can be recognized by the pure white long hairs on tergites 2-4.

Material examined. BRAZIL, *Minas Gerais*: Serra do Caraça, 1880 m., xi. 1961 (Kloss, Lenko, Martins & Silva), 2 males; *Rio de Janeiro*: Angra dos Reis (Juçaral), xi. 1924 (Travassos), 1 female; do. no date (Mendes), 1 female; do., Japuíba, x. 1936 (Travassos & Lopes), 1 female; *São Paulo*: Santo André, i. 1942 (Spitz), 1 female; Campos do Jordão, xii. 1944, i. 1954 (Lane), 2 males; Salesópolis, Estação Biológica de Boracéia, i. 1948 (Travassos Fº & Braz), 1 male; do., ii. 1955 (Werner), 1 male; Cássia dos Coqueiros, Cajuru, x. 1954 (Barretto), 1 female; Ribeirão Preto (Rio Tamanduá), x. 1953 (Barretto), 1 male, 2 females. All in MZUSP.

***Neodiogmites atriapex* (Carrera & Papavero), n. comb.**

Lastauroides atriapex Carrera & Papavero, 1962: 52. Type-locality: Brazil, São Paulo, Araçatuba (Rio Jacaretinga). Type, MZUSP.

***Neodiogmites carrerai*, sp. n.**

Male. Total length, 36 mm; wing length 22 mm.

Face and frons black, spots on each side of oral border, antennal sockets and ocelli white, contrasting strongly with ground color. Frontal hairs and bristles black, weak as compared to the strong bristles on postocular area. Face flat, mystax reduced to 2-3 rows of strong, long, black bristles directed forward. Antenae black, pedicel and first flagellomere with scarce golden pollinosity, scape shorter than pedicel and with short dorsal hairs. First flagellomere compressed, attenuate ventrally towards apex, with a preapical cavity directed downwards bearing a short spine on middle; flagellomere with two divergent rows of short black hairs on dorsum, and, on basal half of external side, a diagonal row of short black hairs. Hairs of palpi, proboscis and beard black, with a few white hairs intermingled, mostly on palpi and beard.

Pronotum black, mostly velvety, with black hairs and bristles. The free procpisternum brownish, with a lighter line on center and borders. Mesonotum black, anterior margin, humeri, lateral margins and dorsocentral stripes velvety, remaining areas dull black. Dorsocentral bristles weak, presuturally hairlike. Supraalar and postalar bristles strong, long. Disc of scutellum bare, two strong marginals present. Pleura black, with dull and velvety areas intermingled. Anepisternum hairs and bristles black. Anatergite bare, velvety, black.

Wing slightly longer than abdomen, uniformly brownish, veins darker.

Legs black, with black hairs, bristles and fore tibial spur, except for the coxae, where there are some white hairs, more abundant on the fore coxae. Claws acute, pulvilli yellow, reaching tip of claws.

Abdomen black, mostly dull, hairs and bristles black, except on posterior margin of tergites 2-5 where there are white hairs, more abundant on tergites 3 and 4. Terminalia black, rotated 90°, with long black hairs on gonocoxites and hypandrium, which are organized like a basket closing the posterior end. Epandrial lobes separated, shorter than gonocoxites, with a deep emargination on distal border. Hypandrium subpentagonal.

Holotype male and paratype male from BRAZIL, *Espírito Santo*: Santa Teresa, iii. 1971 (P.C. Elias), in the MZUSP.

This species is dedicated to Dr. Messias Carrera, as an homage to his many contributions to the knowledge of the Neotropical robberflies.

***Neodiogmites hirtuosus* (Wiedemann), n. comb.**

Dasypogon hirtuosus Wiedemann, 1821: 227. Type-locality: "Brazil". Type?

Lastauroides hirtuosus; Carrera, 1949: 97.

The color of the legs in this species is also variable, males sometimes showing a comple-

tely black femur. This species may be recognized by the color of the tergites' hairs (intensely yellow).

Material examined. Brazil, *Rio de Janeiro*: Itatiaia, 1.200 m., ii. 1934 (Shannon), 1 male; Petrópolis, no date (Spanhauer), 1 female; *São Paulo*: Salesópolis, Estação Biológica de Boracéia, iii. 1968 (Oliveira Santos), 1 female; do., ii. 1949 (Carrera), 1 male, 1 female; do., ii. 1968 (Travassos F°), 1 female (teneral); Campos do Jordão (Fazenda Guarda-Serrote), 1.510 m., iii. 1963 (Rabello, Guimarães & Barroso), 1 male (with *Fidena*, Tabanidae, as prey). All in MZUSP.

Neodiogmites lanei (Carrera), n. comb.

Lastaurax lanei Carrera, 1949: 110. Type-locality: Brazil, Rio de Janeiro, Tinguá. Type, MZUSP.

Neodiogmites melanogaster (Wiedemann)

Dasypogon melanogaster Wiedemann, 1821: 215. Type-locality: "Brazil". Syntypes, WIEN.

Dasypogon grandis Macquart, 1846: 63. Type-locality: "Brazil". Type lost.

Dasypogon rapax Walker, 1851: 88. Type-locality: "South America". Type, BMNH.

Neodiogmites mixtus (Carrera), n. comb.

Lastauroides mixtus Carrera, 1949: 101. Type-locality: Brazil, São Paulo, Campos do Jordão. Type, MZUSP.

Lastauroides modestus Carrera, 1949: 103. Type-locality: Brazil, São Paulo, Campos de Jordão. Type, MZUSP. n. syn.

Carrera described *modestus* on the base of the blackish color of the tarsi and apex of tibiae; as seen with the other species treated before, the color of the legs is variable, and we have decided to synonymize it with *mixtus*.

In addition to the specimens studied by Carrera (1949) we have seen 3 females from Campos do Jordão (São Paulo), ii. 1958 (Lenko), in the MZUSP.

Neodiogmites niger (Carrera), n. comb.

Lastauroides niger Carrera, 1949: 99. Type-locality: Brazil, Rio de Janeiro, Rio de Janeiro. Type, MZUSP.

Lastauroides albomarginatus Carrera, 1949: 98. Type-locality: Brazil, São Paulo, Paranapiacaba (as Alto da Serra). Type, MZUSP.

Carrera described *albomarginatus* based on a single female with blackish beard, most certainly a variation; we synonymize it with *niger*, selecting the latter name as valid, as first revisors.

Material examined. BRAZIL, *São Paulo*: Campos do Jordão, (Eugênio Lefevre), 1.200 m, ii.1963 (Guimarães, Morgante, Rocha, Barroso & Travassos F°), 1 female; Salesópolis, Estação Biológica de Boracéia, 850 m, i.1960 (Guimarães), 1 female; do., ii.1968 (Oliveira Santos), 2 females; do., i.1964 (Rabello), 1 female; do., ii.1963 (Silva & Reichardt), 1 male. All in MZUSP.

Neodiogmites tauauna, sp. n.

Female. Body length, 17 mm; wing length, 12 mm.

Face densely golden tomentose. Mystax in 2-3 irregular rows, limited to oral margin, golden. Frons less densely golden tomentose, with groups of small, black bristles laterally. Ocellar tubercle black in ground color, yellow tomentose, with black bristles. Occiput densely golden pollinose, with golden bristles and hairs. Beard golden yellow. Palpi dark yellow, with golden bristles. Proboscis black, light brown basally and ventrally, with long, fine, yellow hairs. Antennae brownish, flagellomere twice as long as comined length of scape and pedicel, darker apically, with black dorsal hairs.

Thorax black, golden-yellow pollinose; mesonotum with three longitudinal spots separated by golden pollen; the lateral spots divided at transverse suture by golden pollen. Humeral bristles developed, black. Dorsocentrals beginning at level of posterior margin of humeri, longer near scutellum, black. Pilosity of mesonotum mixed black and yellow. Pleura black, sparsely golden-yellow pollinose, hairs and bristles yellow.

Wing yellowish basally and posteriorly; apical 1/3 and hind margin of wing dark (blackish) microvillose. Halteres reddish-yellow.

Legs yellowish; apical segment of tarsi blackish. Pilosity short, moderately dense,

black; bristles black. Pulvilli yellowish-brown, claws black.

Abdomen black, subshining; very narrow posterior rim of tergites 2-6 reddish-brown; tergite 7 with larger posterior rim, 8 and terminalia entirely reddish-brown. First tergite with long, stiff, yellow bristles laterally. First tergite posteriorly, tergites 2-4 lateroposteriorly and posteriorly, sparsely yellow pollinose, with not very long and dense golden hairs. The short and semi-erect pilosity of the tergites black. Venter of abdomen black, grey pollinose, pilosity short, semi-erect, black.

Holotype female, BRAZIL, *Espirito Santo*: Itapina, xi.1970 (Elias), in the MZUSP.

The specific names comes from the Guarani *tauá* = yellow and *una* = black.

Genus Saropogon Loew
(Figs. 144-150)

Dasypogon, subg. *Saropogon* Loew 1847: 439. Type-species, *luctuosus* Wiedemann (Coquillett 1910: 603).

Araiopogon Carrera 1949: 122. Type-species, *Dasypogon gayi* Macquart (Orig. des.). n. syn.

Oberon Carrera & Papavero 1962: 57. Type-species, *velutinus* Carrera & Papavero (orig. des.) n. syn.

This genus included now in South America the following species: *choapensis* (Artigas, 1971), *fraternus* (Bigot, 1878), *fulvicornis* (Macquart, 1850), *gayi* (Macquart, 1838; = *chalybeiventris* (Loew, 1851); = *hyacinthinum* Bigot, 1878), *melisoma* (Carrera & Papavero, 1962), *mellipes* Bromley, 1934, *nigronasutus* Bigot, 1878, *perniger* Schiner, 1868, and *velutinus* (Carrera & Papavero, 1962), n. comb.

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Manuscrito aceptado en junio de 1988

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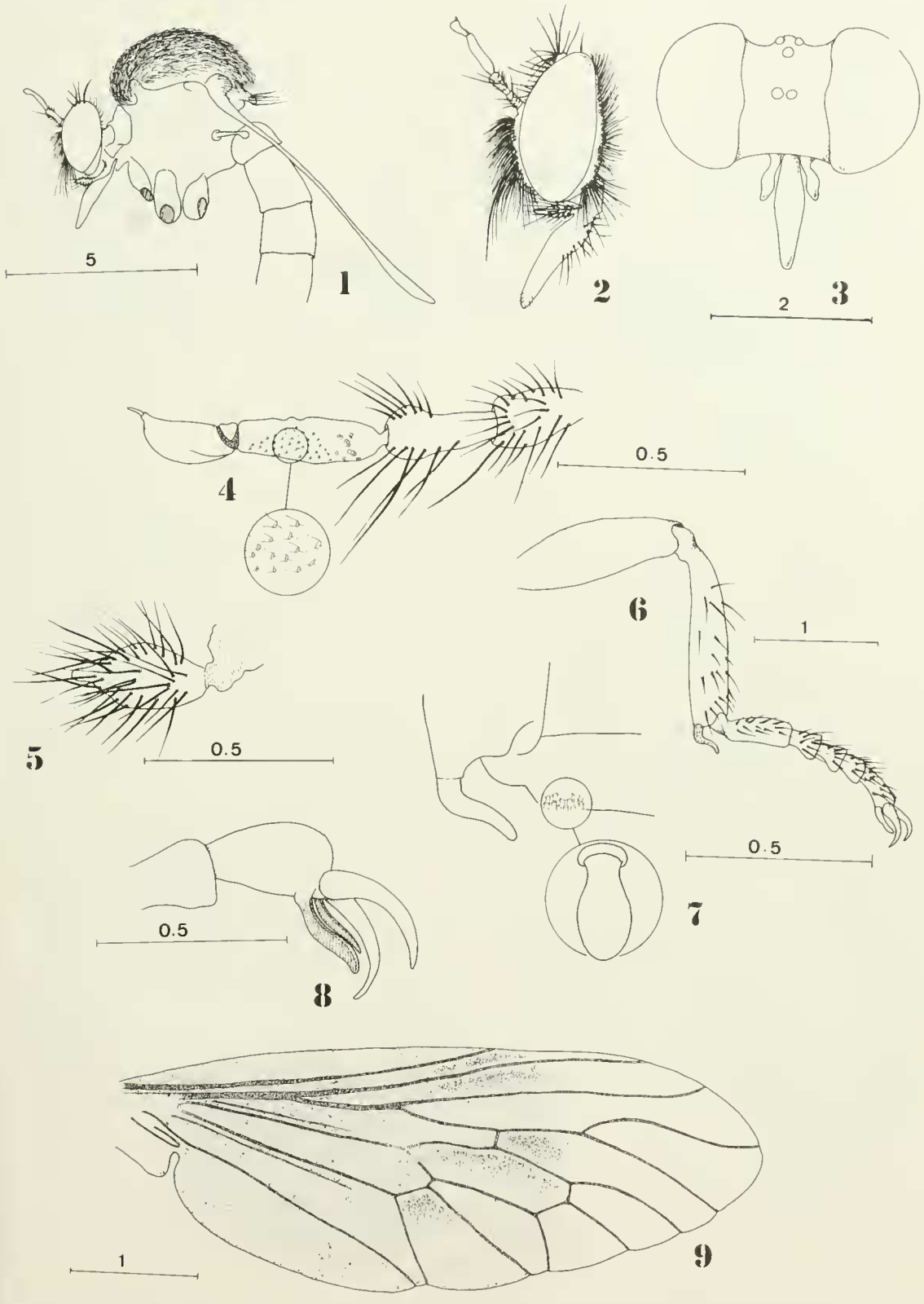
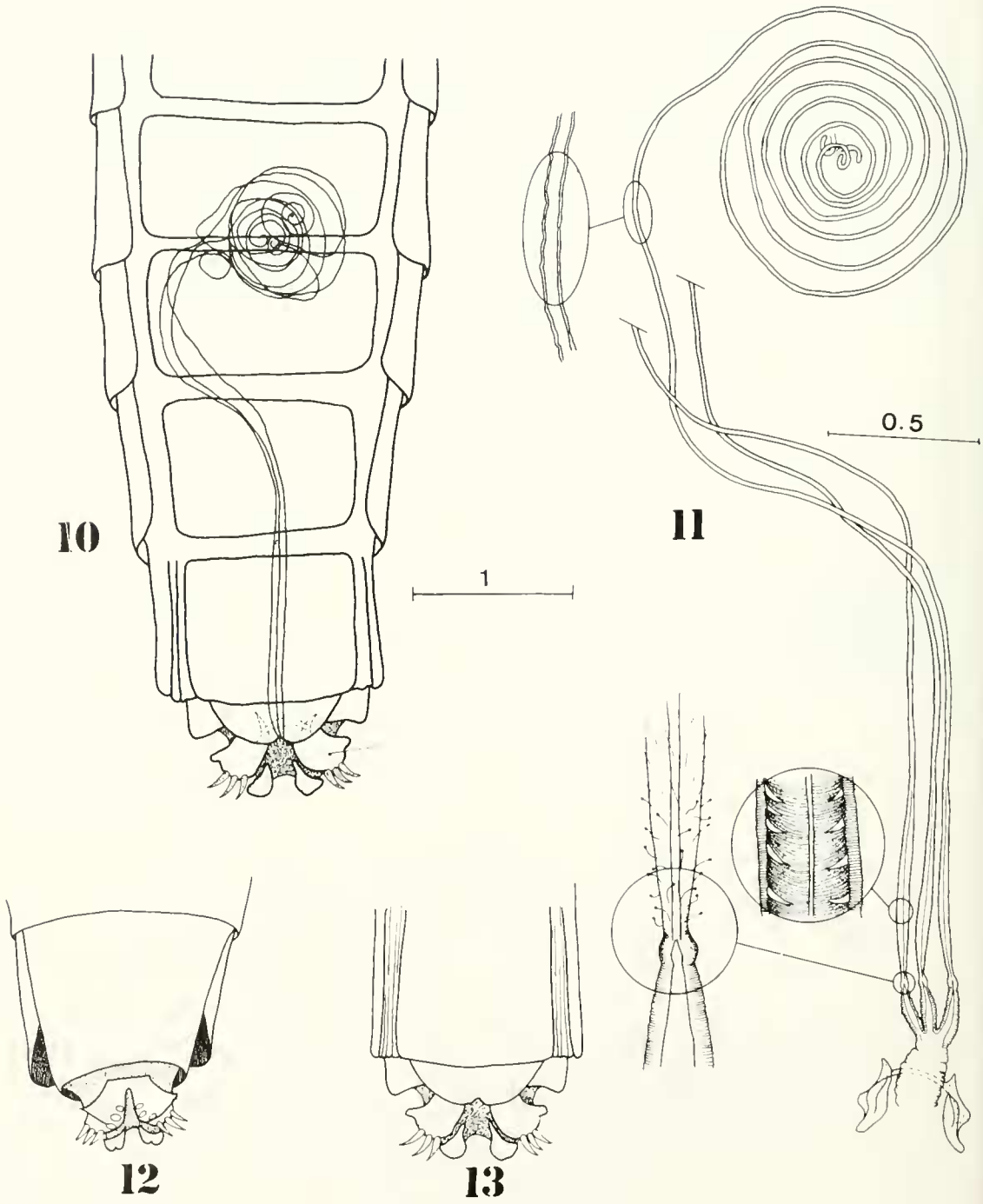
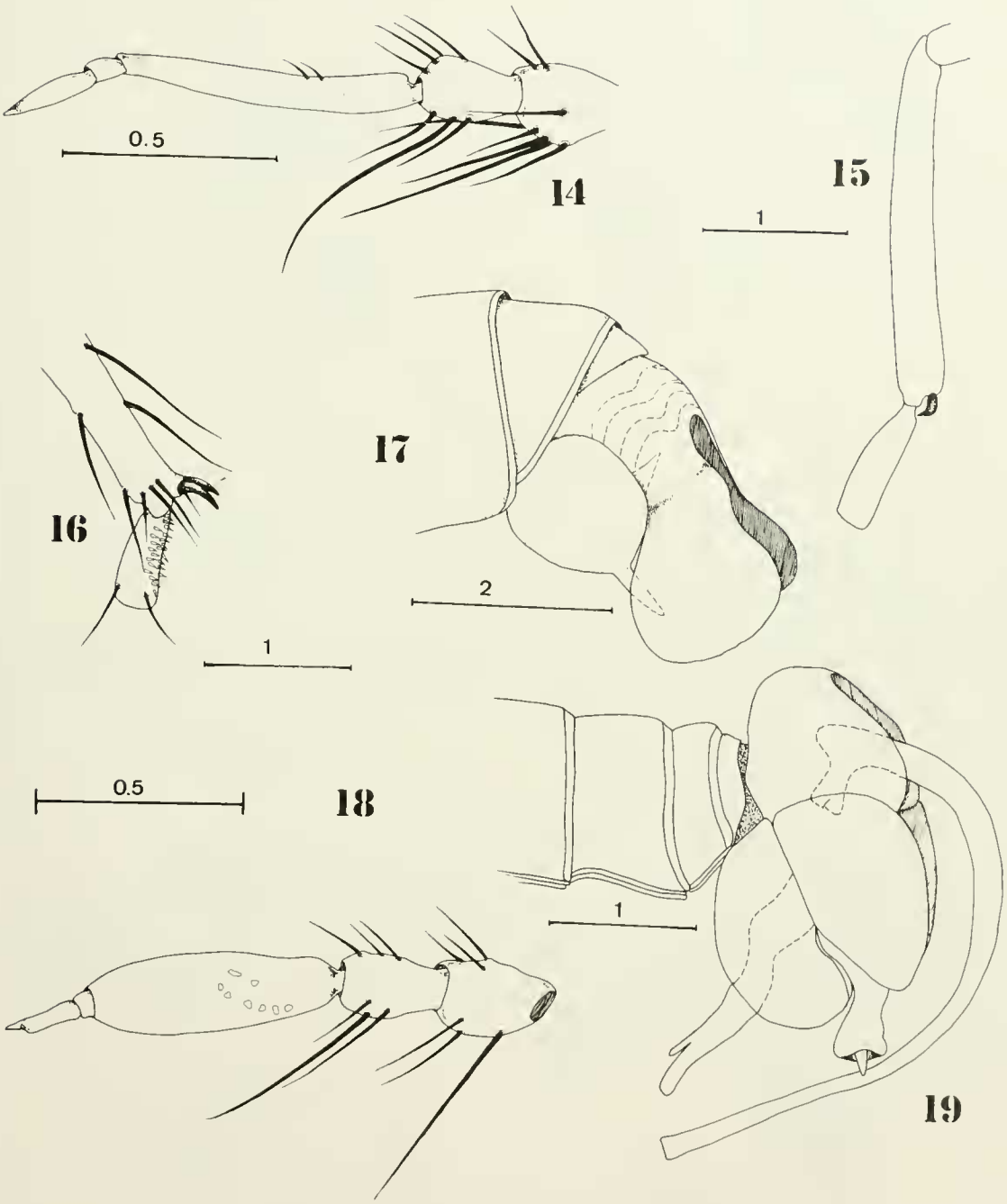


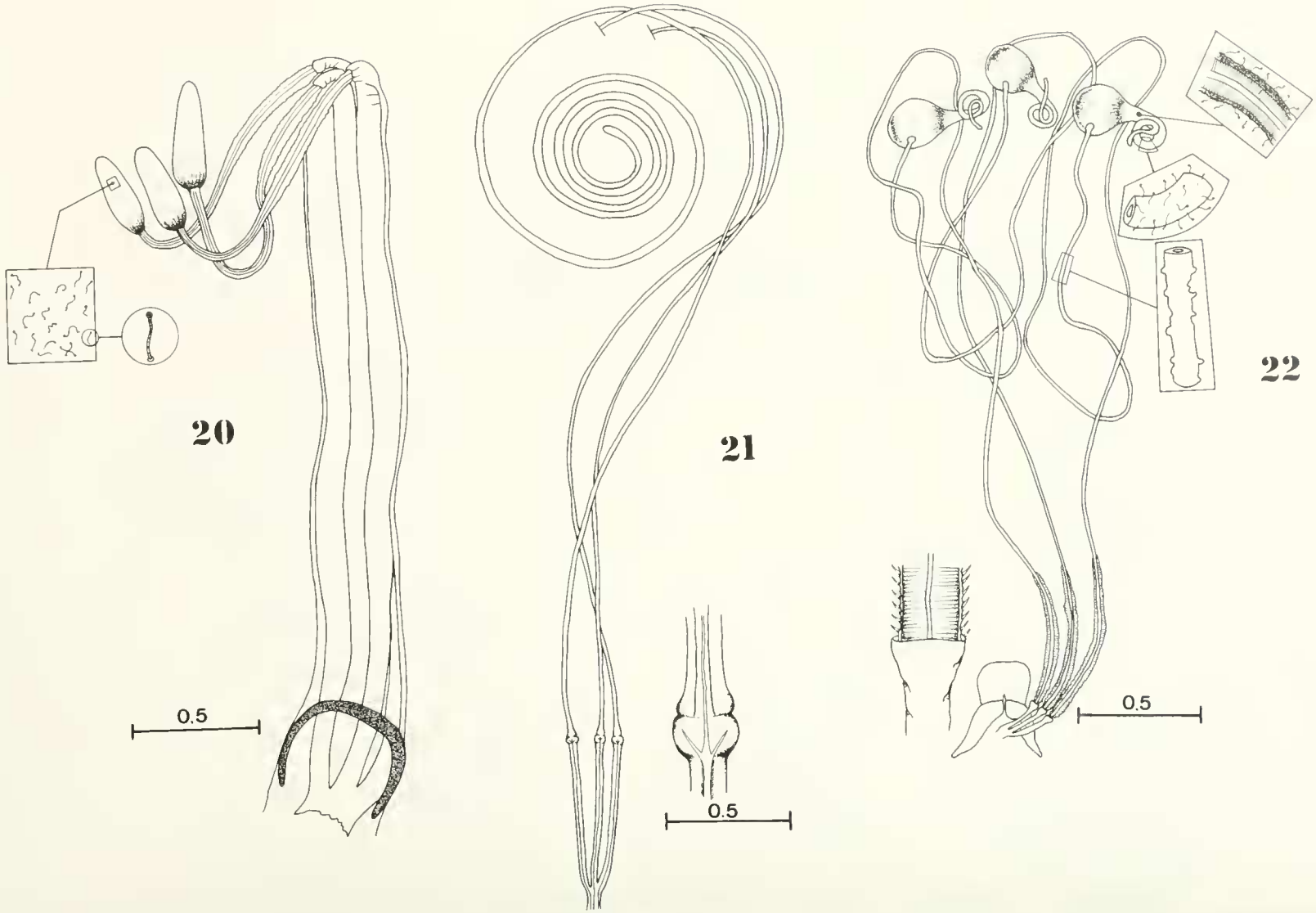
FIGS. 1-9. *Alvarenga icarius* Carrera: 1, lateral view of thorax; 2, head, lateral; 3, do., frontal; 4, antenna; 5, palpus; 6, front leg; 7, detail of fore tibial spur; 8, apical tarsomere and pulvilli; 9, wing.



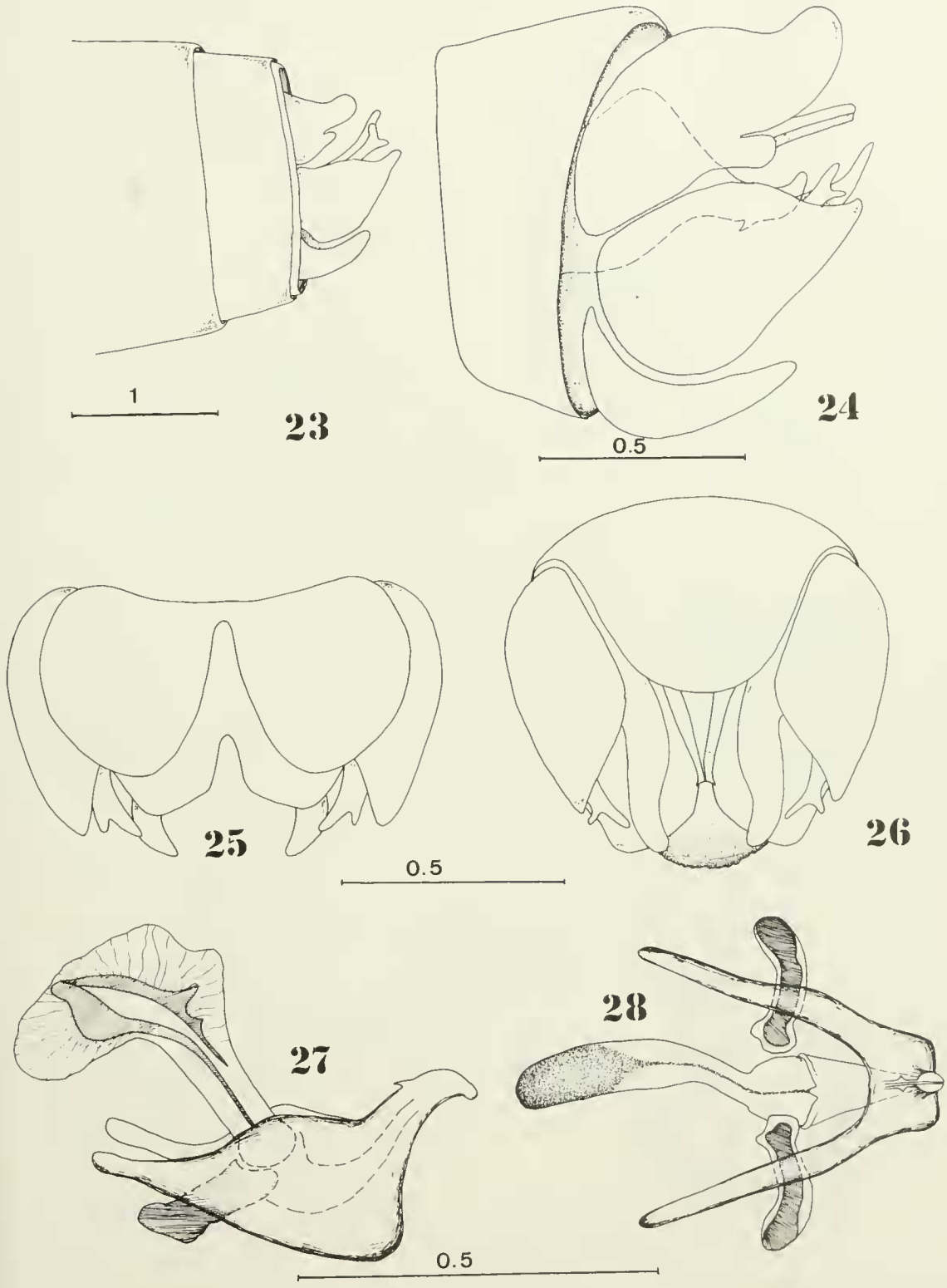
Figs. 10-13. *Alvarenga matilei* Papavero: 10, situation of the spermathecae in the abdomen; 11, detail of spermathecae; 12, female terminalia, dorsal; 13, do., ventral.



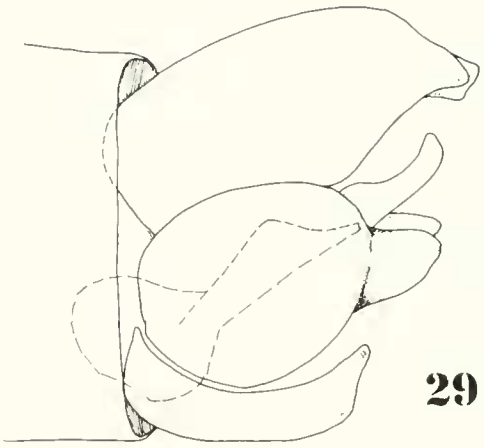
Figs. 14-19. *Aspidopyga cophuroides* Carrera: 14, antenna; 15, fore leg; 16, detail of mid tibial spines; 17, male terminalia, lateral. *Aphamartania pritchardi* Carrera: 18, antenna; 19, male terminalia, lateral.



FIGS. 20-22. Spermathecae of: 20, *Aphamartania pritchardi* Carrera; 21, *Aspidopyga cophuroides* Carrera, and 22 *Comantella rotgeri* James.



Figs. 23-28. *Comantella fallei* (Back): 23-26, male terminalia, *in situ*, lateral, dorsal and ventral views; 27-28, aedeagus, lateral and dorsal.



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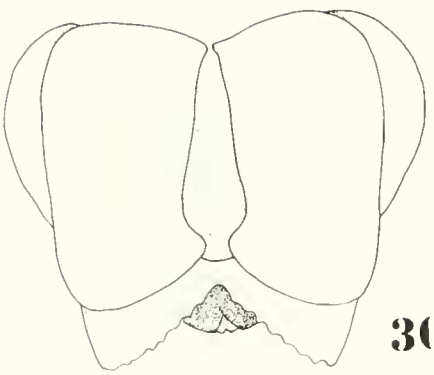

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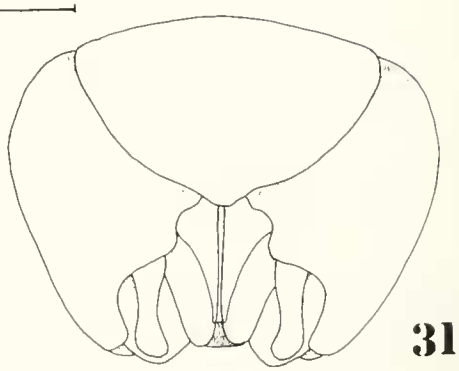

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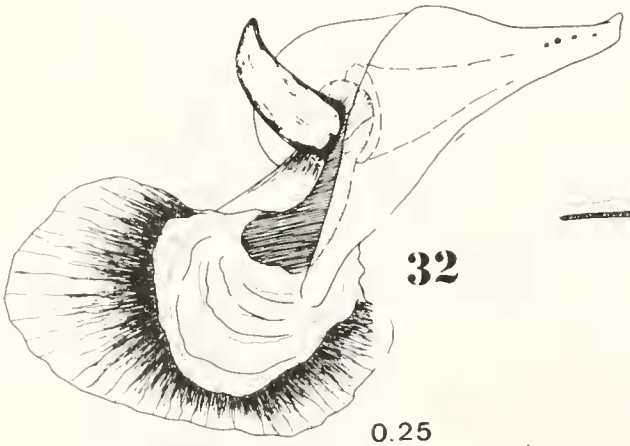

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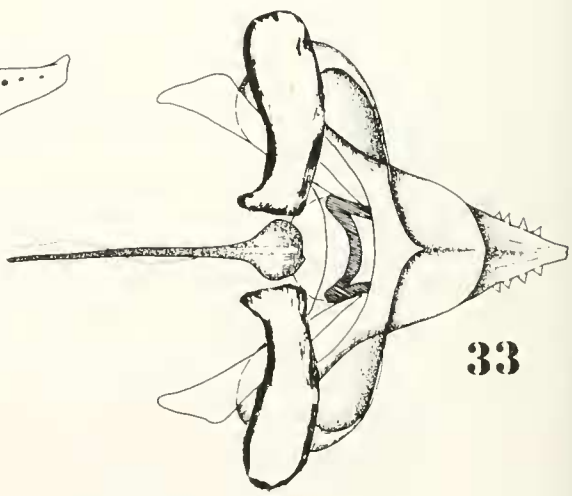

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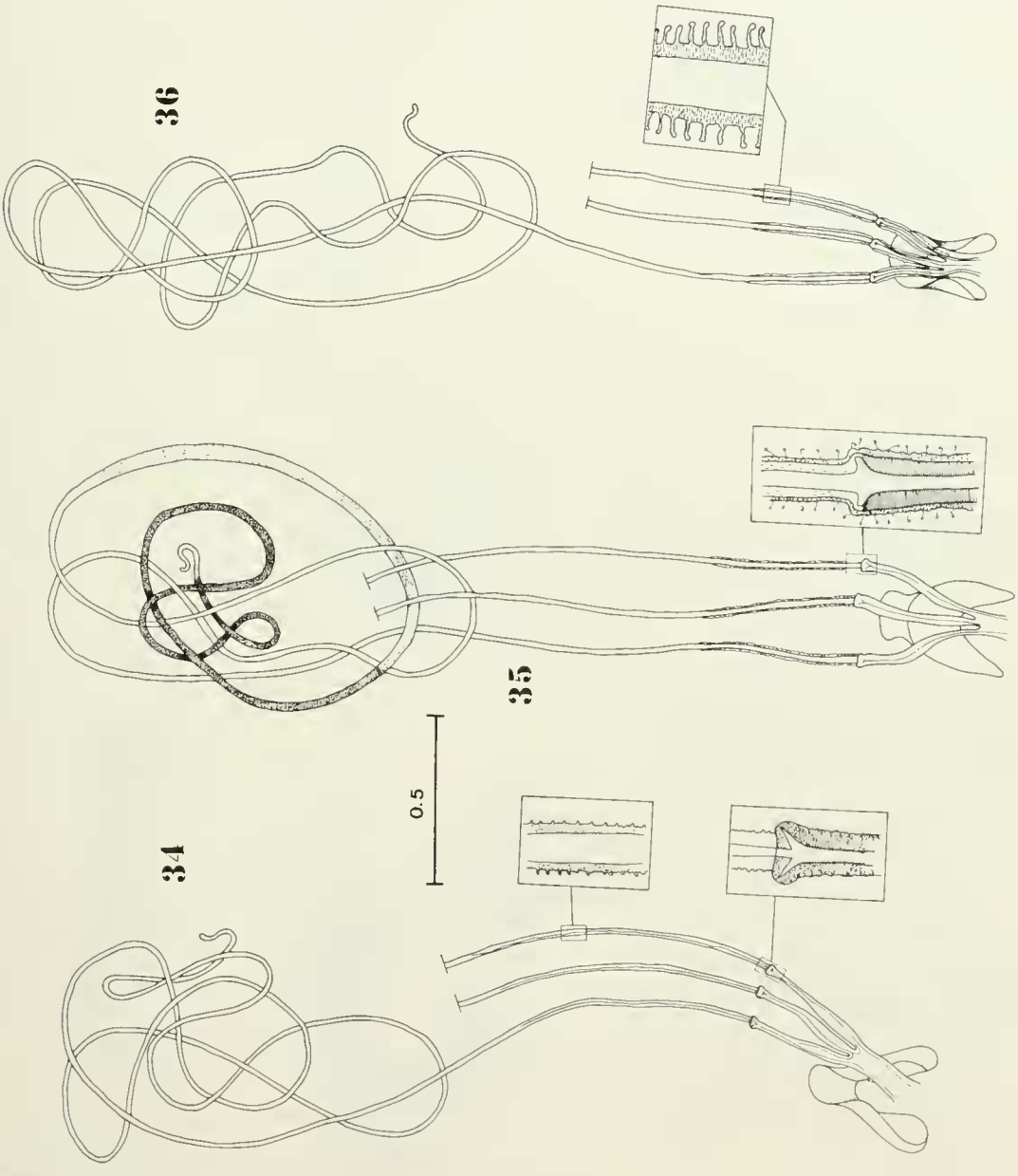
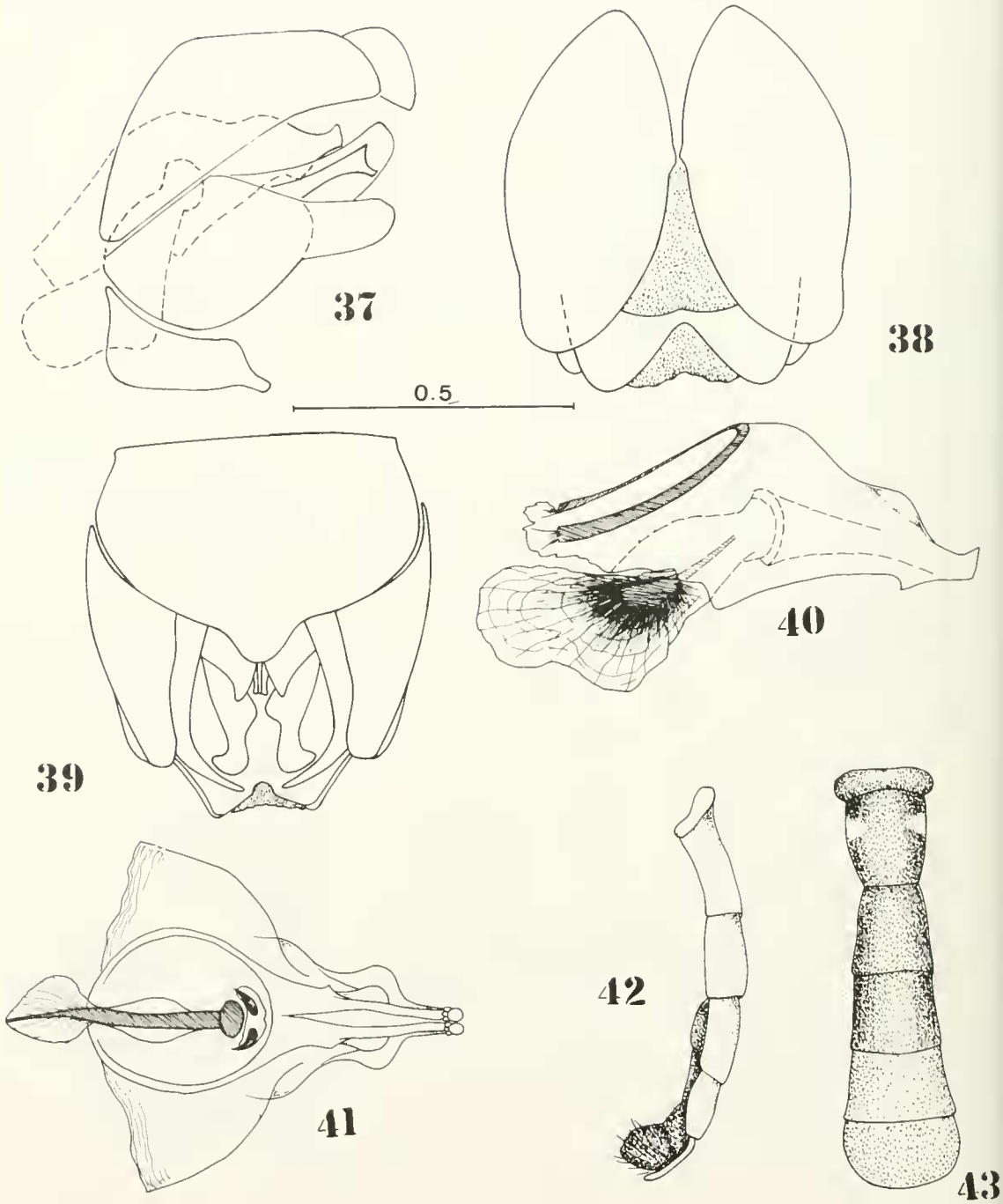
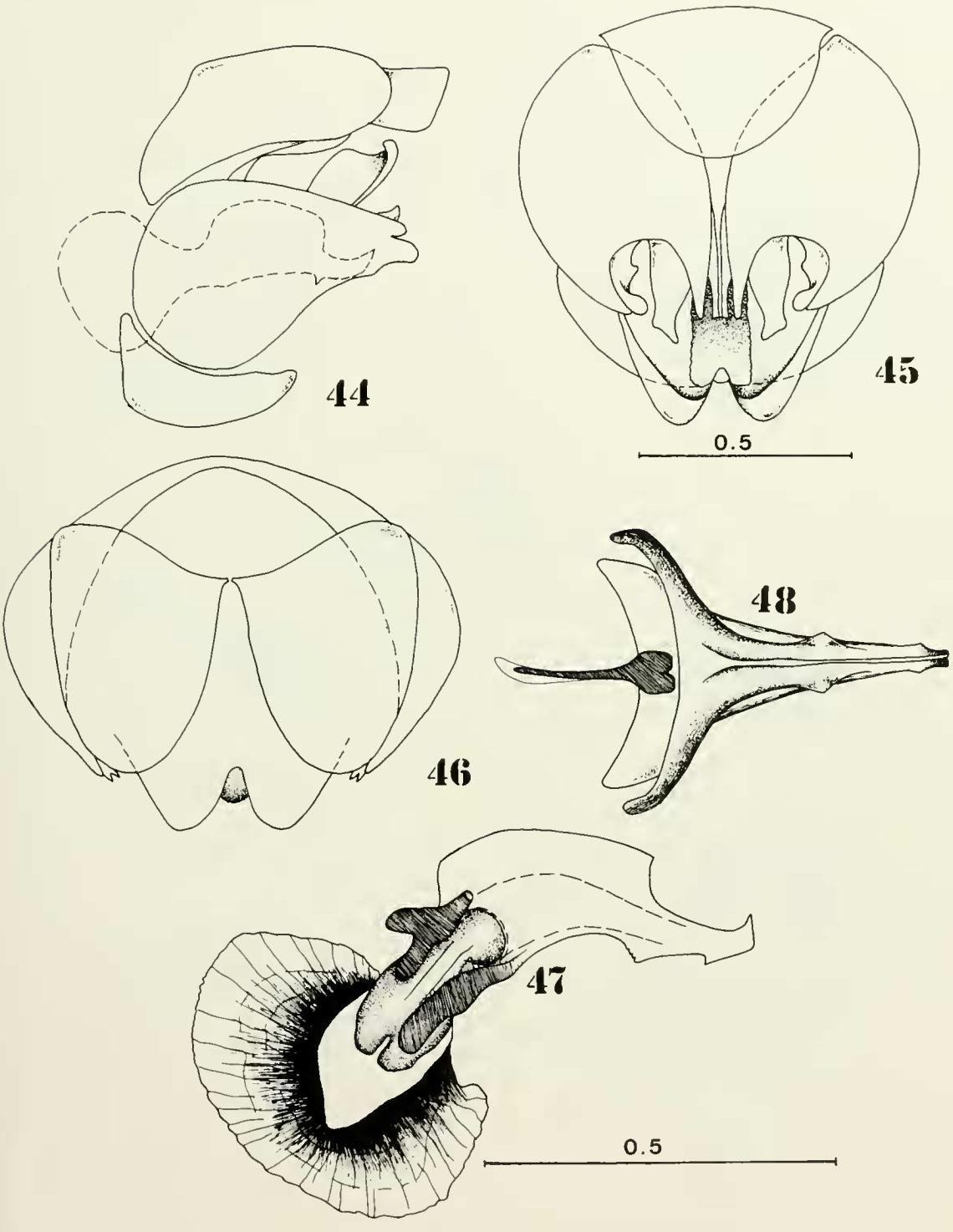
FIGS. 29-33. *Cophura arizonensis* (Schaeffer): 29-31, male terminalia, lateral, dorsal and ventral views; 32-33, aedeagus, lateral and dorsal views.



Figs. 34-36. Spermathecae of *Cophura*: 34, *C. arizonensis* (Schaeffer); 35, *C. bella* (Loew); 36, *C. melanochaeta* Melander.

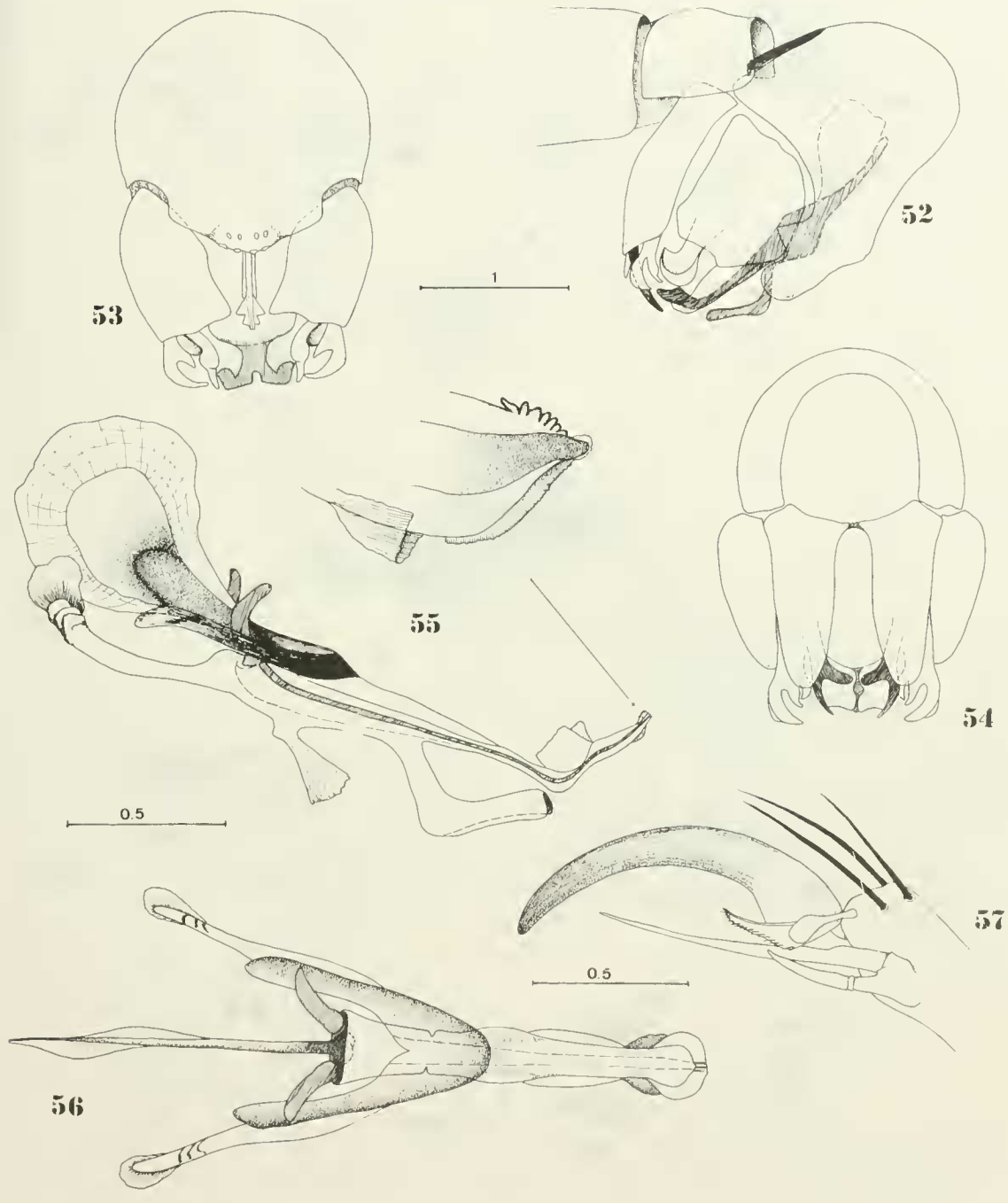


FIGS. 37-43. *Hodophylax basingeri* Pritchard: 37-39, male terminalia, lateral, dorsal and ventral views; 40-41, aedeagus, lateral and dorsal views. *Nicocles aemulator* (Loew): 42-43, abdomen, lateral and dorsal views.

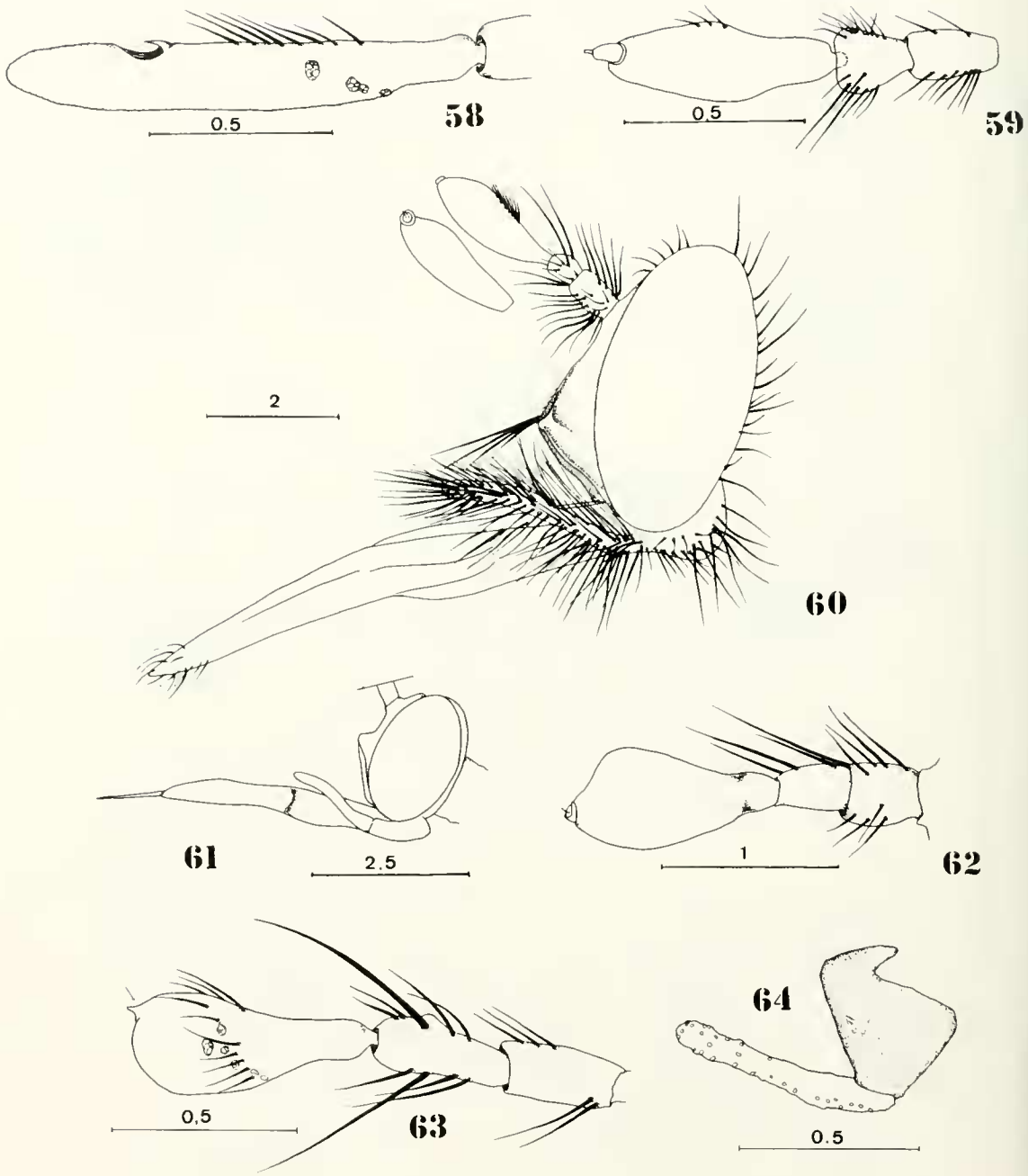


Figs. 44-48. *Nicocles argentatus* Coquillett: 44-46, male terminalia, lateral, ventral and dorsal views; 47-48, aedeagus in lateral and dorsal views.

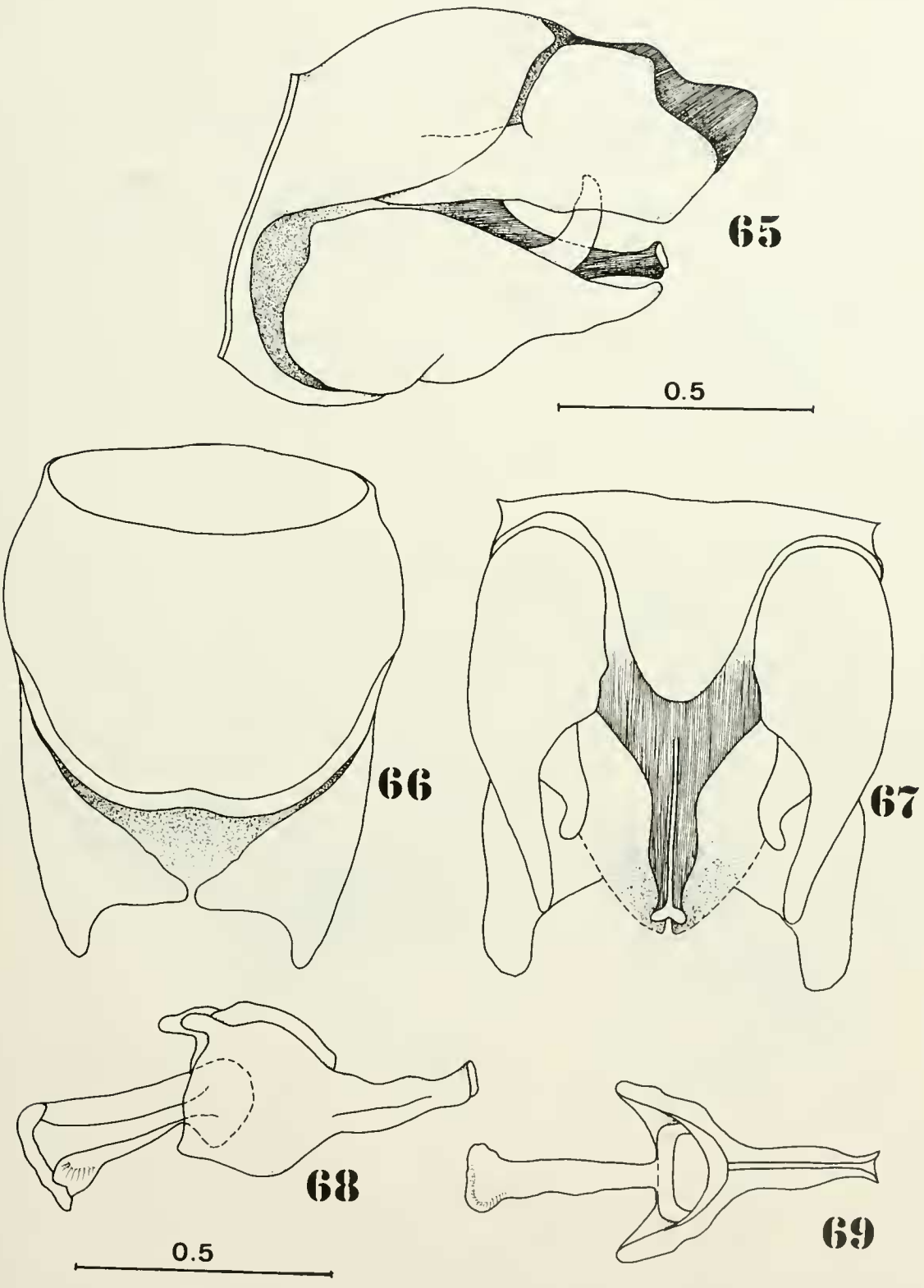
FIGS. 49-51. Spermathecae of *Hodophylax ardus* James (49), *Neocles argentatus* Coquillett (50) and *Omnnablautus nigronotum* (Wilcox) (51).



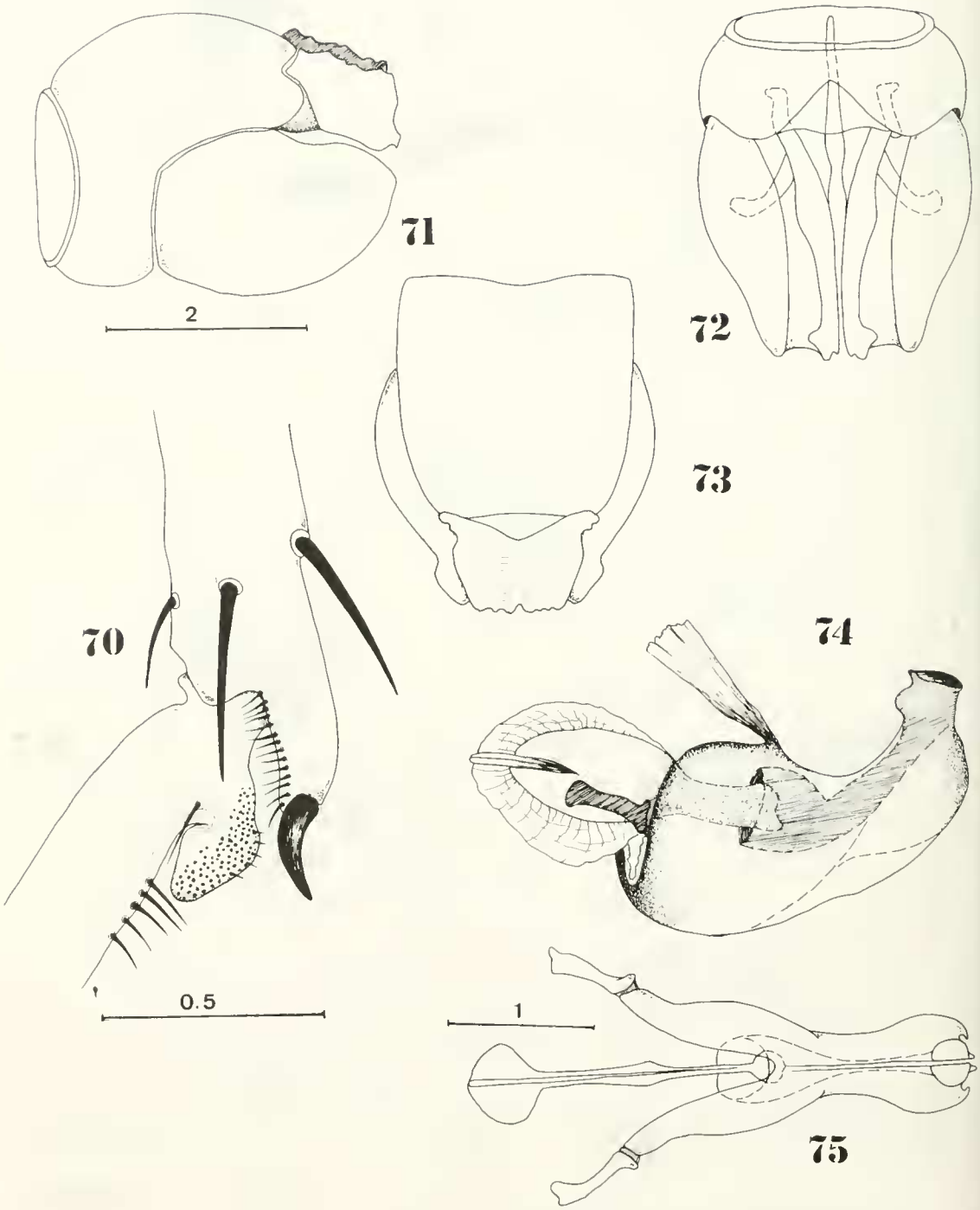
Figs. 52-57. *Theromyia pegnai* Artigas: 52-54, male terminalia, lateral, ventral and dorsal views; 55-56, aedeagus, lateral and dorsal views. *Theromyia murina* (Philippi): 57, detail of fore apical tarsomere showing reduced pulvilli.



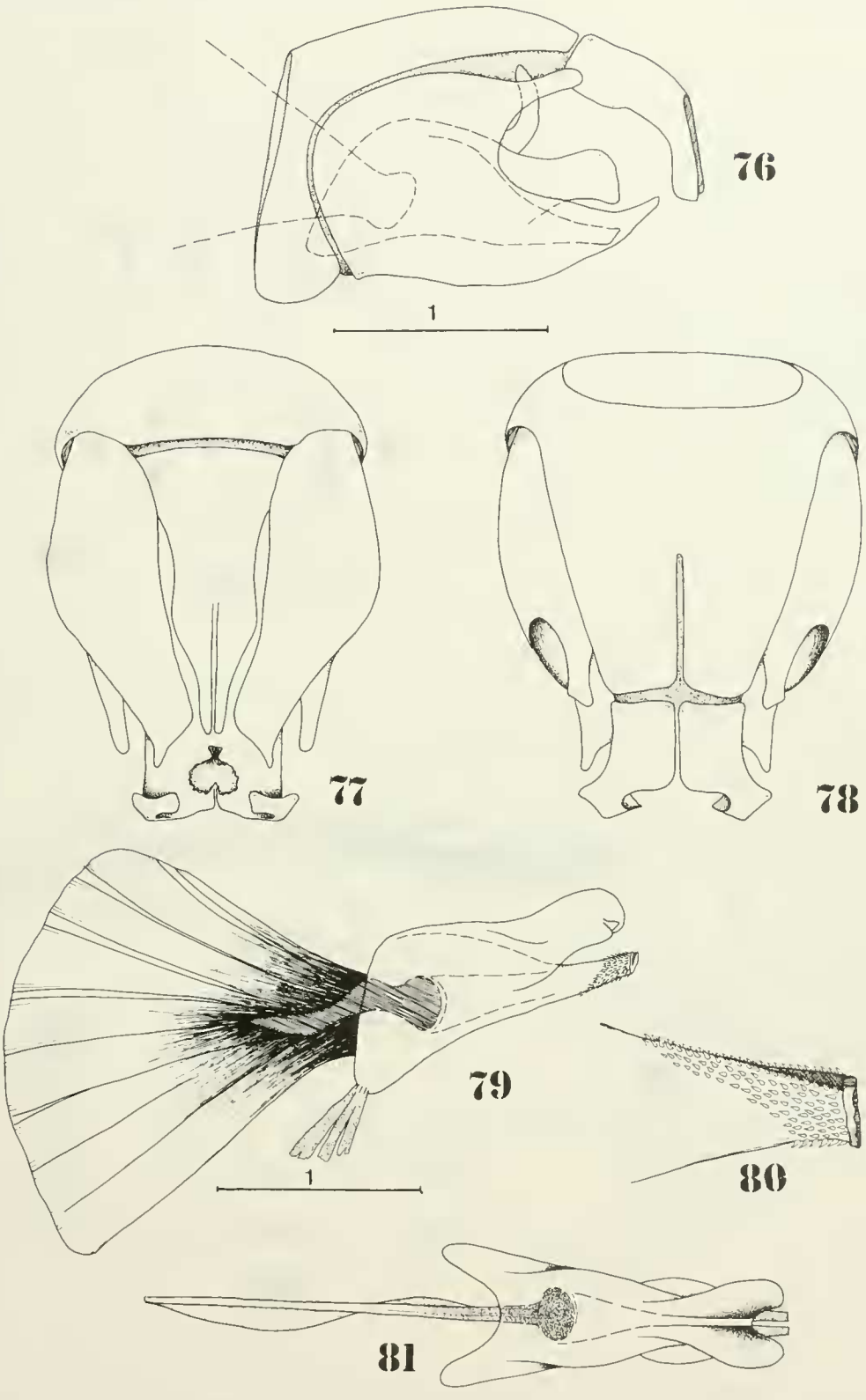
FIGS. 58-64. *Cyrtophrys albimanus* (Carrera); 58, antenna. *Deromyia fuscipennis* (Blanchard); 59, antenna. *Megapoda labiata* (Fabricius); 60, head, lateral. *Psedourus martini* Papavero; 61, head, lateral; 62, do., antenna. *Senobasis claripennis* (Schiner); 63, antenna; 64, do., palpus.



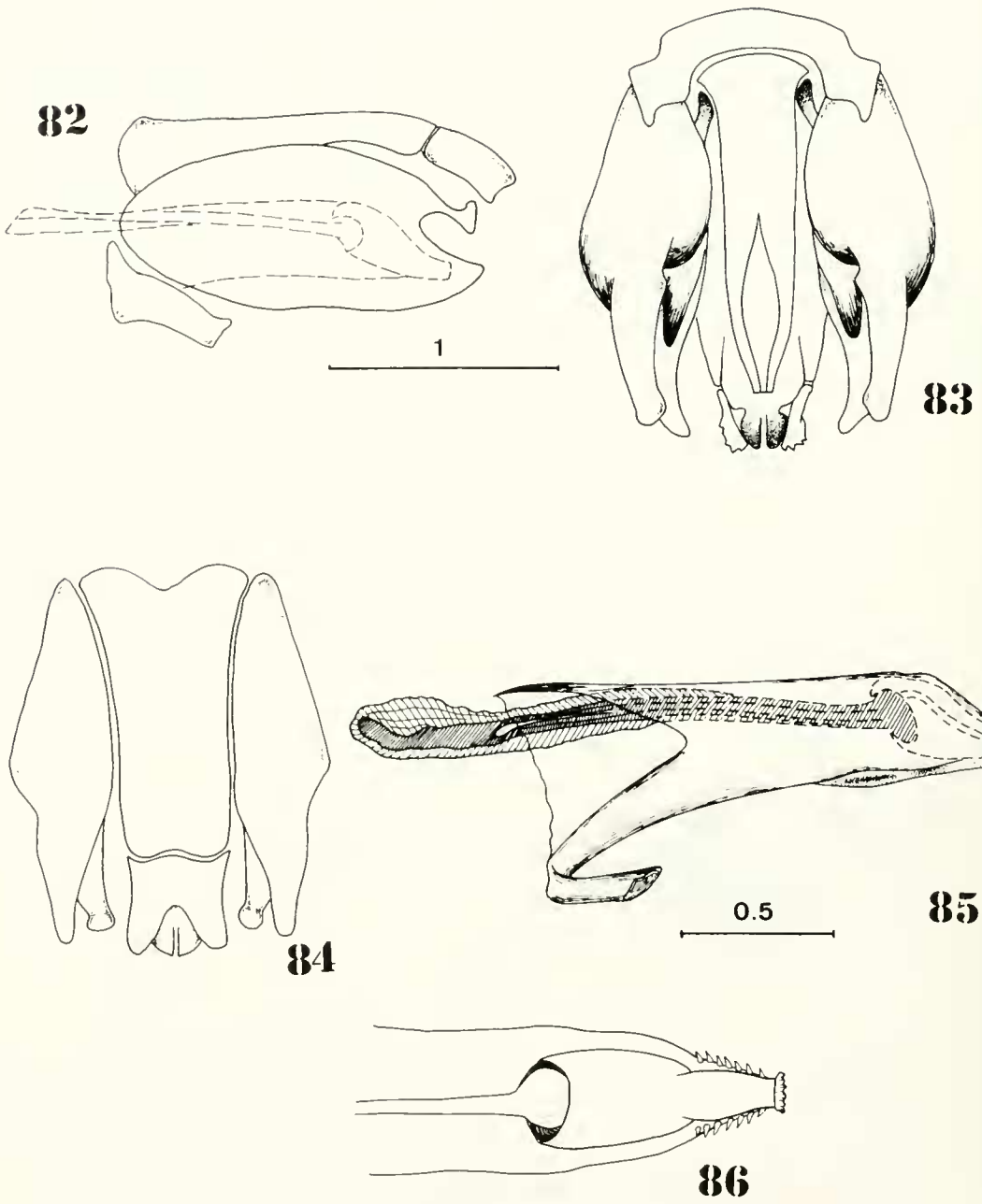
Figs. 65-69. *Cyrtophrys attenuatus* (Loew): 65-67, male terminalia, lateral, dorsal and ventral views; 68-69, aedeagus in lateral and dorsal views.



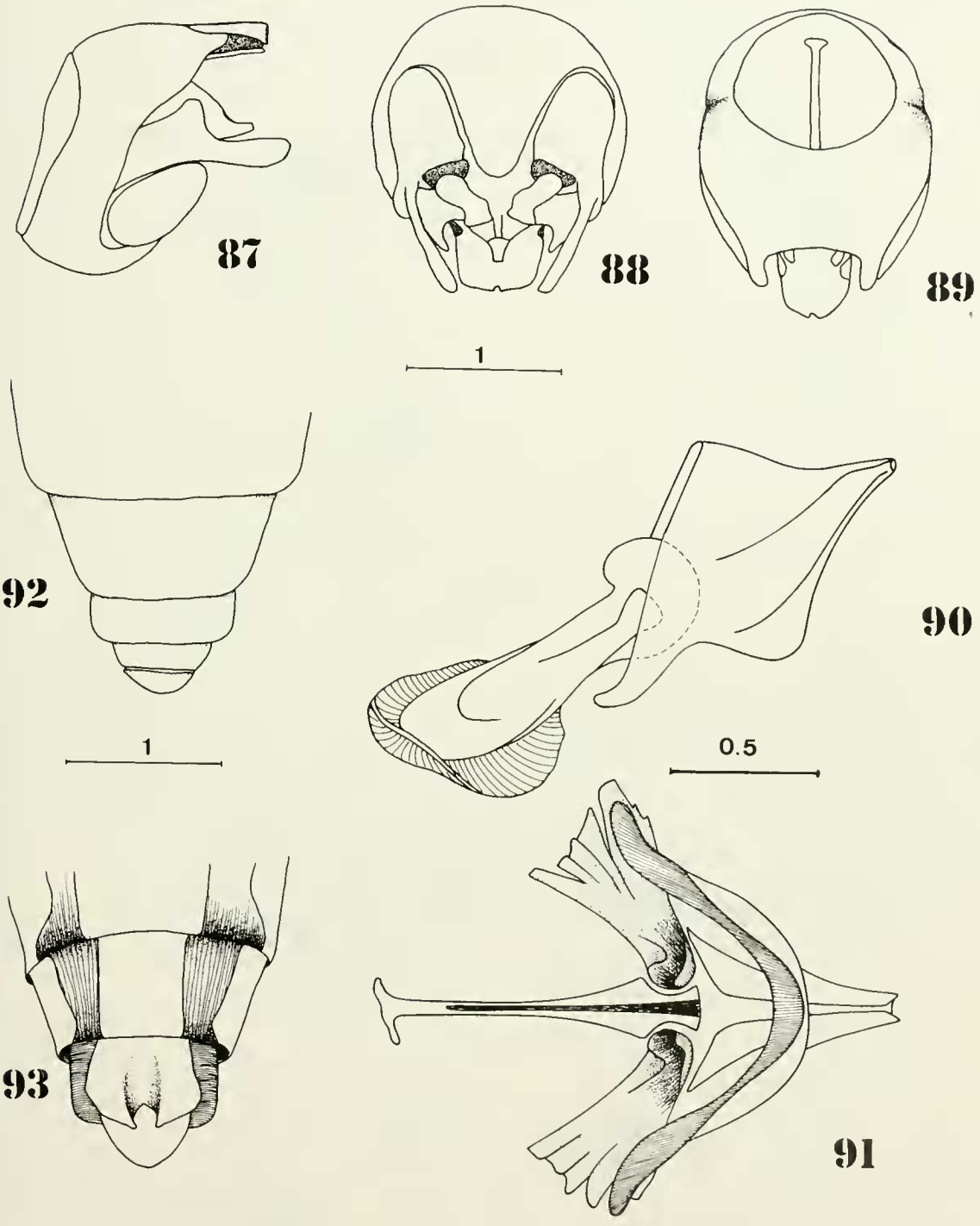
FIGS. 70-75. *Megapoda labiata* (Fabricius): 70, apex of fore tibia showing spur and basal tarsomere with flange and denticles; 71-73, male terminalia, lateral, ventral and dorsal views; 74-75, aedeagus, lateral and dorsal views.



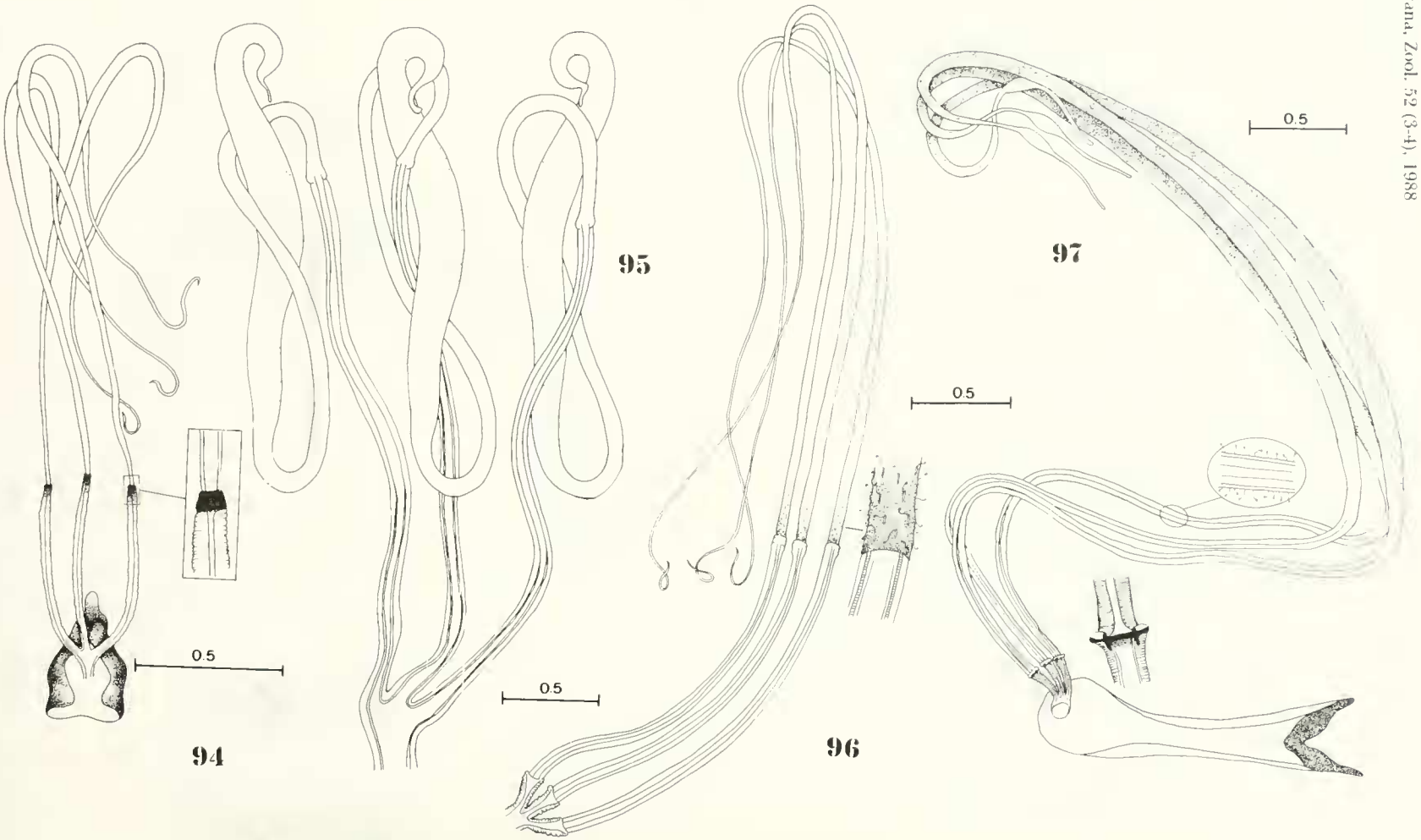
Figs. 76-81. *Pronomopsis rubripes* Hermann: 76-78, male terminalia, lateral, ventral and dorsal views; 79-81, aedeagus, lateral, detail of apex, dorsal.



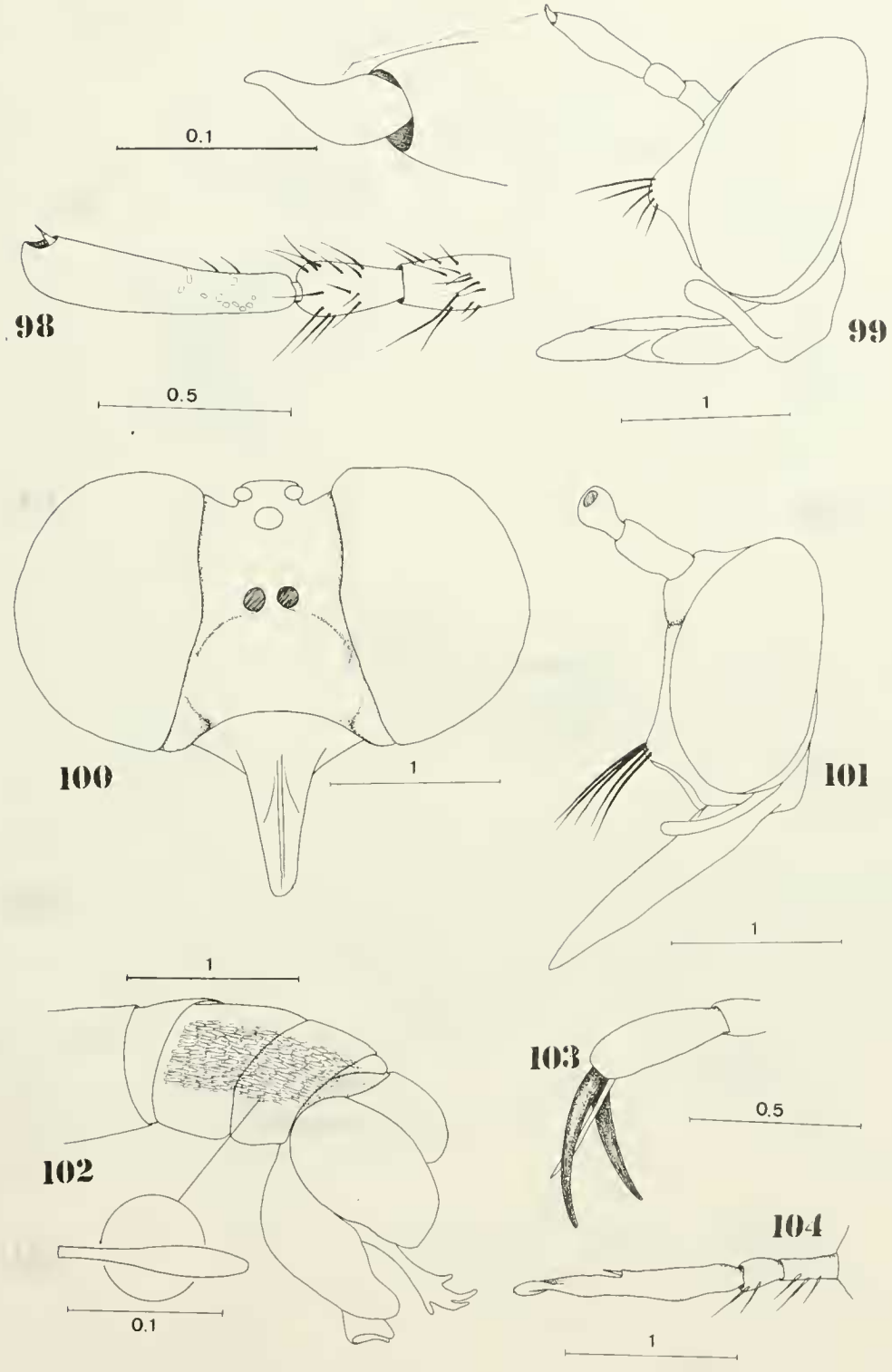
FIGS. 82-86. *Pseudorus distendens* (Wiedemann):82-84, male terminalia, lateral, ventral and dorsal views; 85-86, aedeagus, lateral and dorsal.



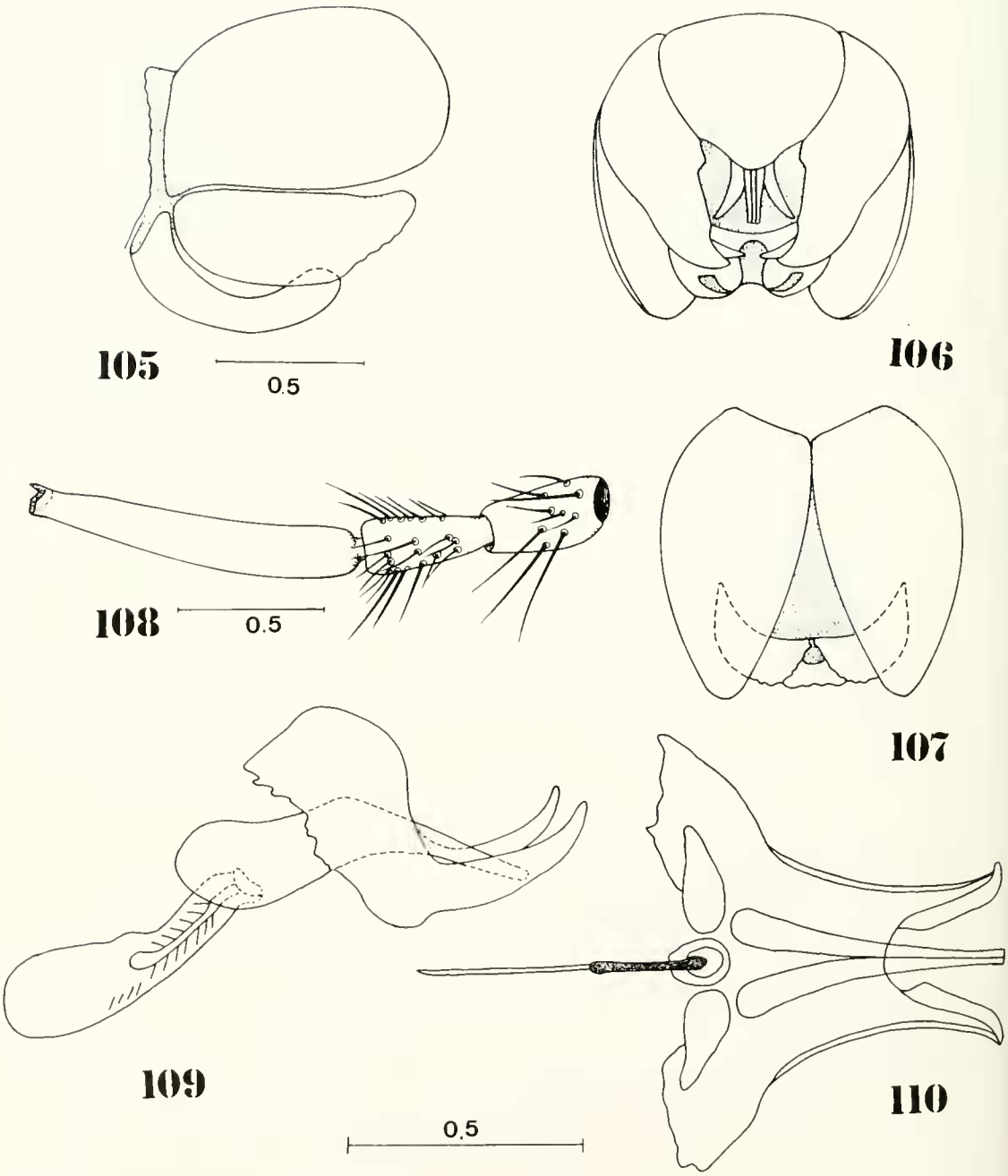
Figs. 87-93. *Senobasis apicalis* (Schiner): 87-91, male terminalia, lateral, ventral and dorsal views, aedeagus in lateral and dorsal views; 92-93, female abdomen in dorsal and ventral views.



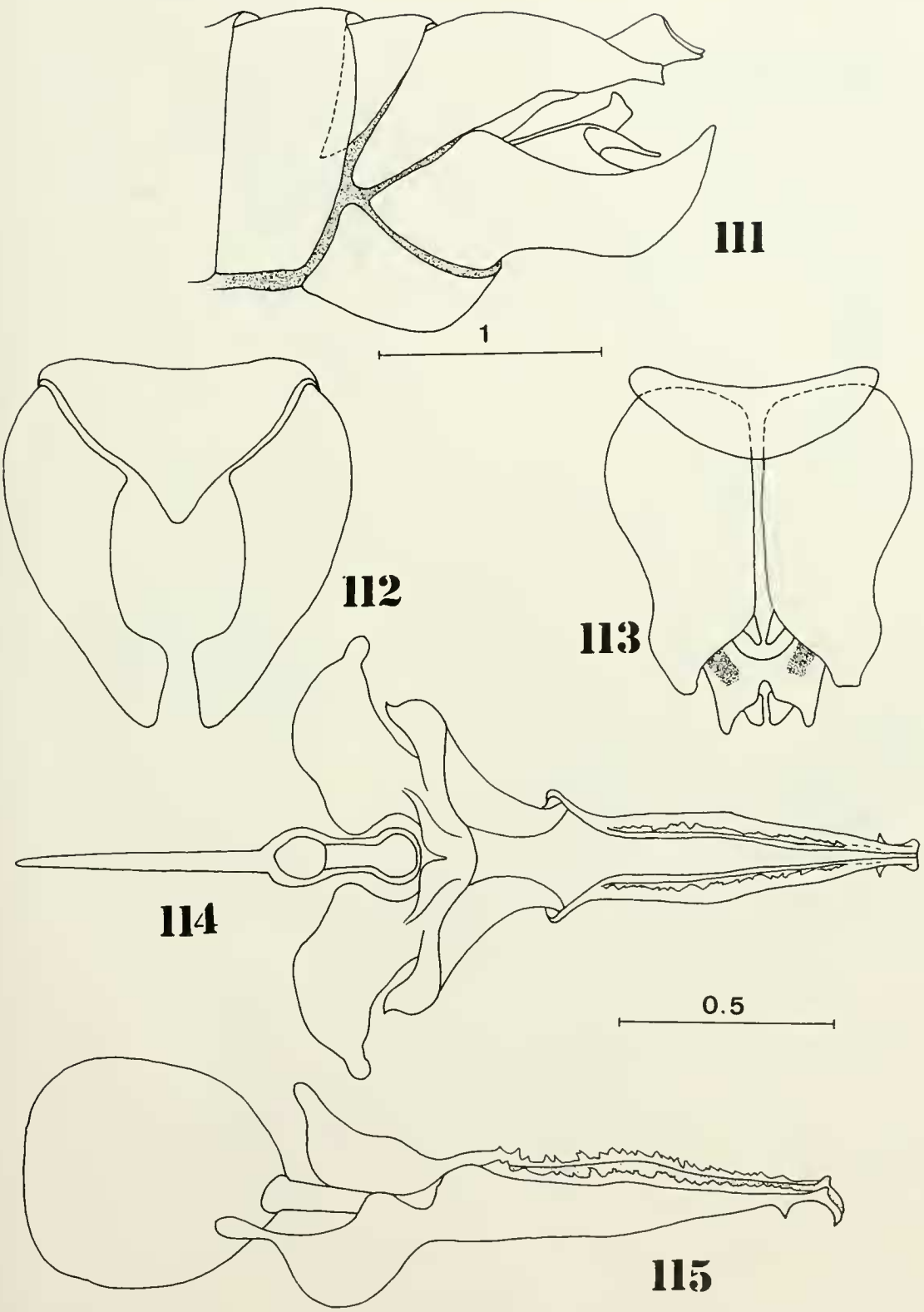
FIGS. 94-97. Spermathecae of: 94, *Cyrtophrys attenuatus* (Loew); 95, *Megapoda labiata* (Fabricius); 96, *Senobasis bromleyana* Carrera and; 97, *Pseudorus distendens* (Wiedemann).



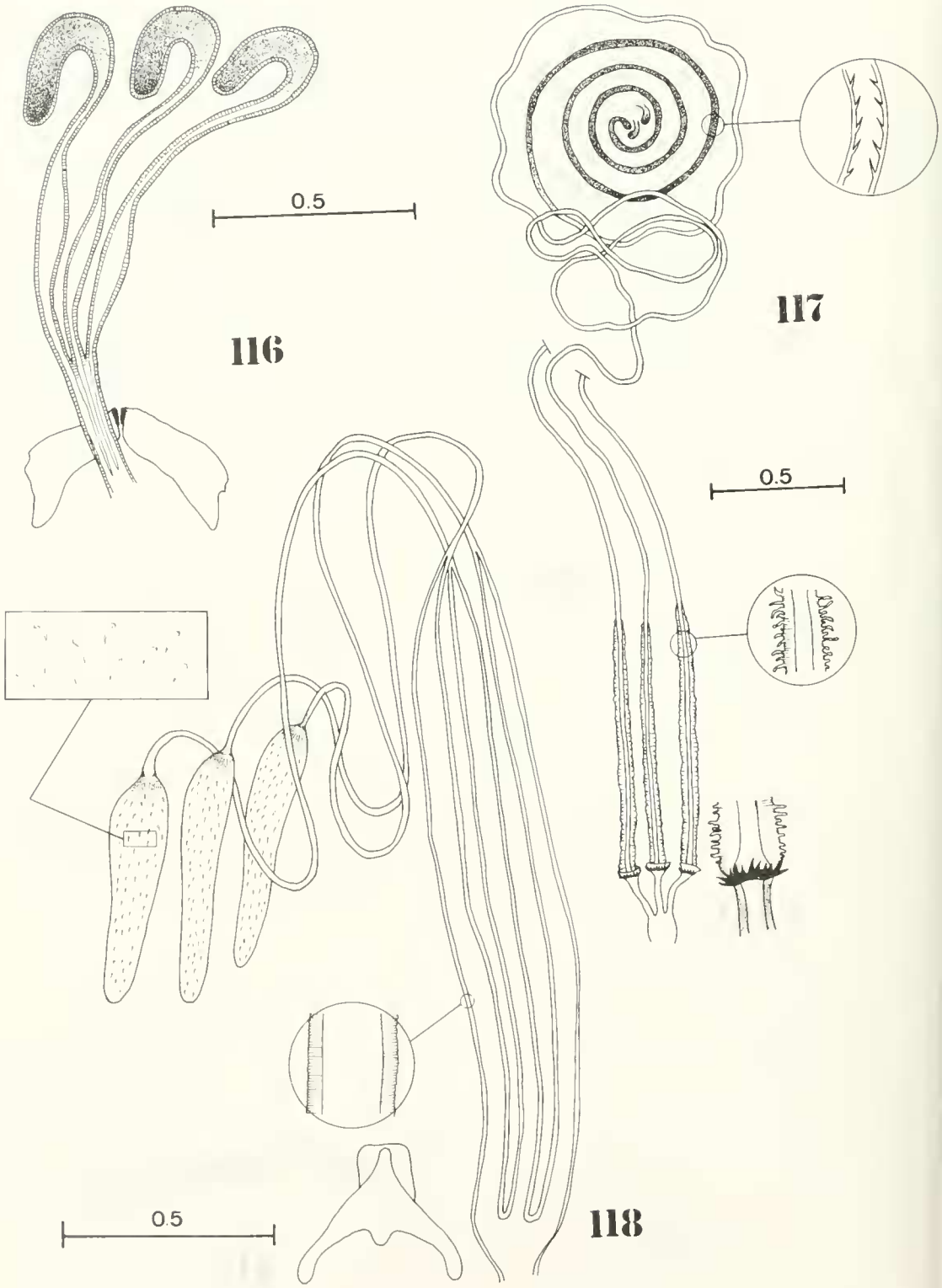
FIGS. 98-104. 98, *Austenmyia amazona* Carrera, antenna; 99, *Cleptomyia tripartita* (Walker), head and detail of flagellomere; 100, do., head, frontal view; 101, *Tocantinia misera* (Walker), head, lateral; 102, *C. tripartita* (Walker), apex of male abdomen; 103, *Parataracticus arenicolus* Martin, apical tarsomere, showing absence of pulvilli; 104, *Taracticus octopunctatus* (Say), antenna.



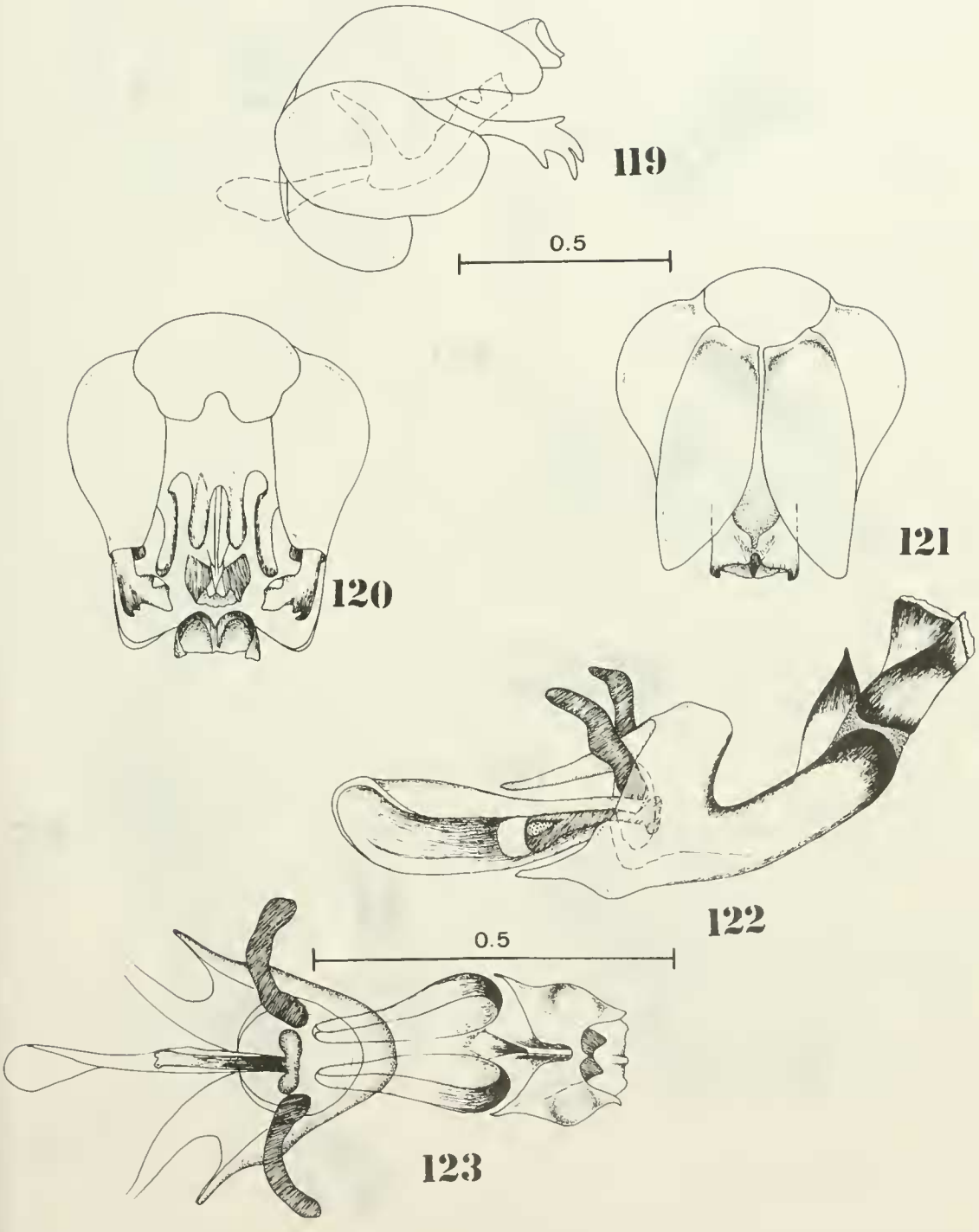
FIGS. 105-110. *Aczelia tsacasi* Papavero: 105-107, male terminalia, lateral, ventral and dorsal views. *Aczelia argentina* (Wulp): 108, antenna; 109-110, aedeagus in lateral and dorsal views.



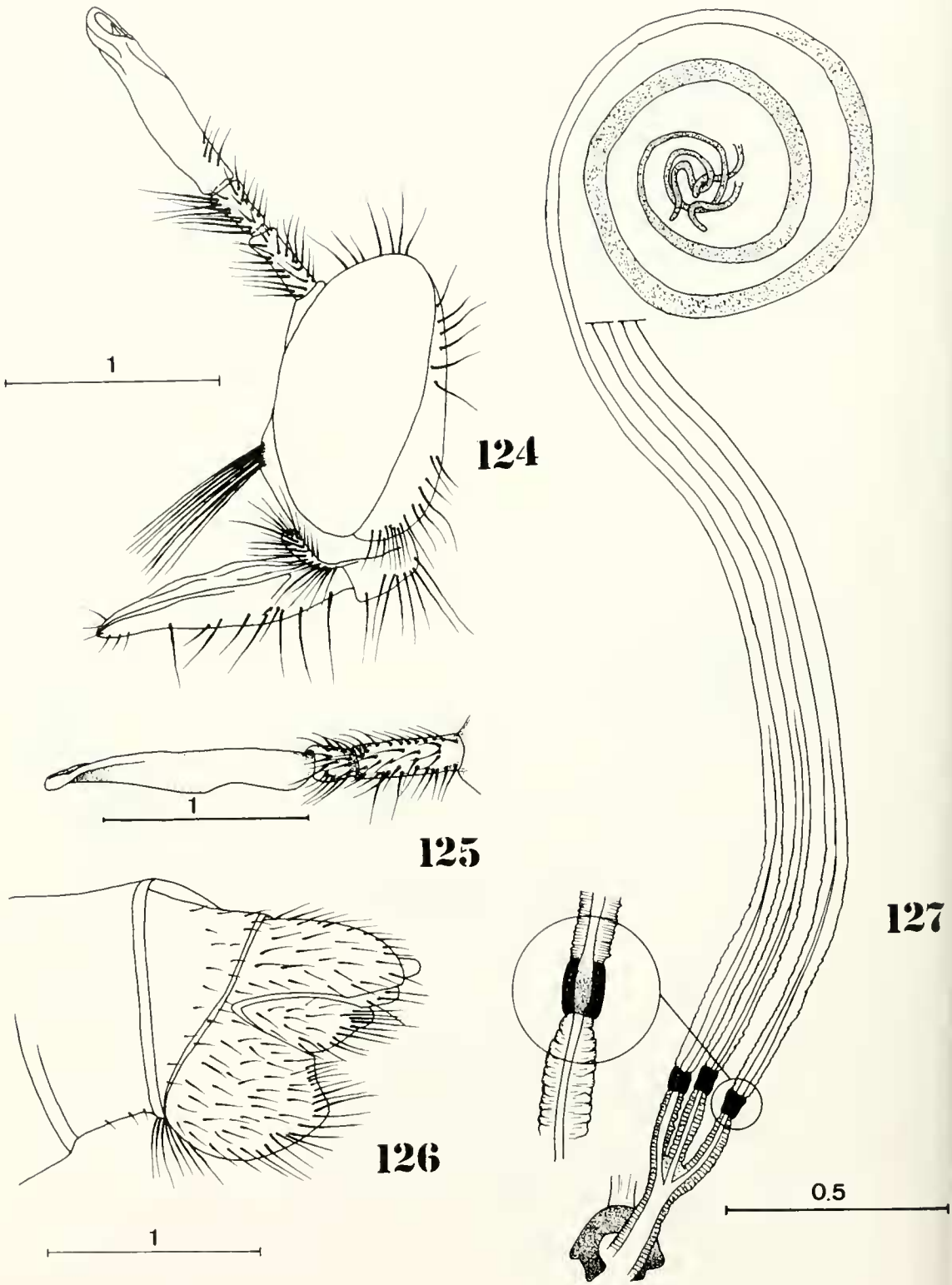
Figs. 111-115. *Araucopogon cyanogaster* (Loew): 111-113, male terminalia, lateral, ventral and dorsal views; 114-115, aedeagus in dorsal and lateral views.



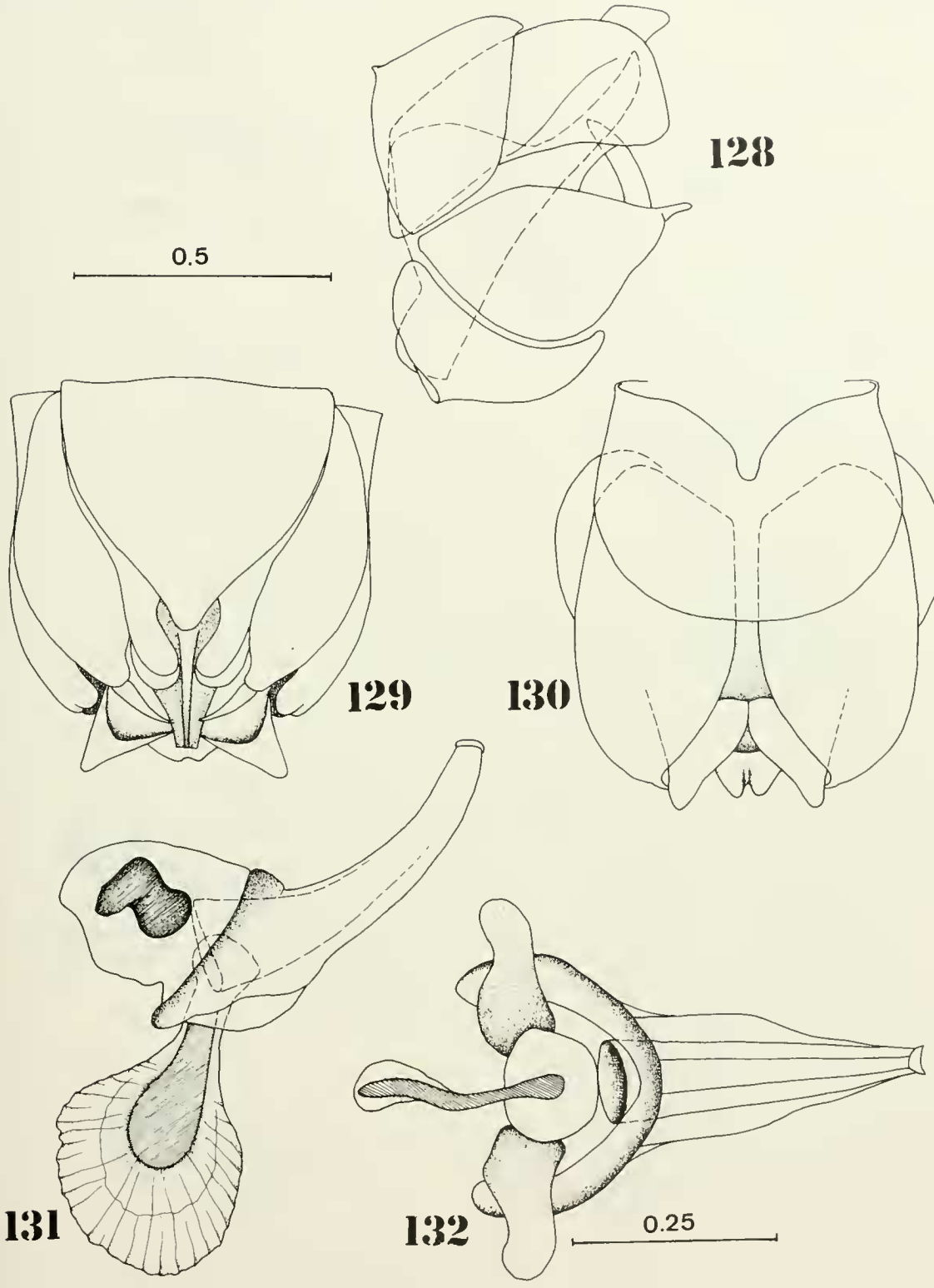
FIGS. 116-118. Spermathecae of: 116, *Aczelia argentina* (Wulp); 117, *Araucopogon cyanogaster* (Loew) and 118, *Cleptomyia bacillifera* Carrera.



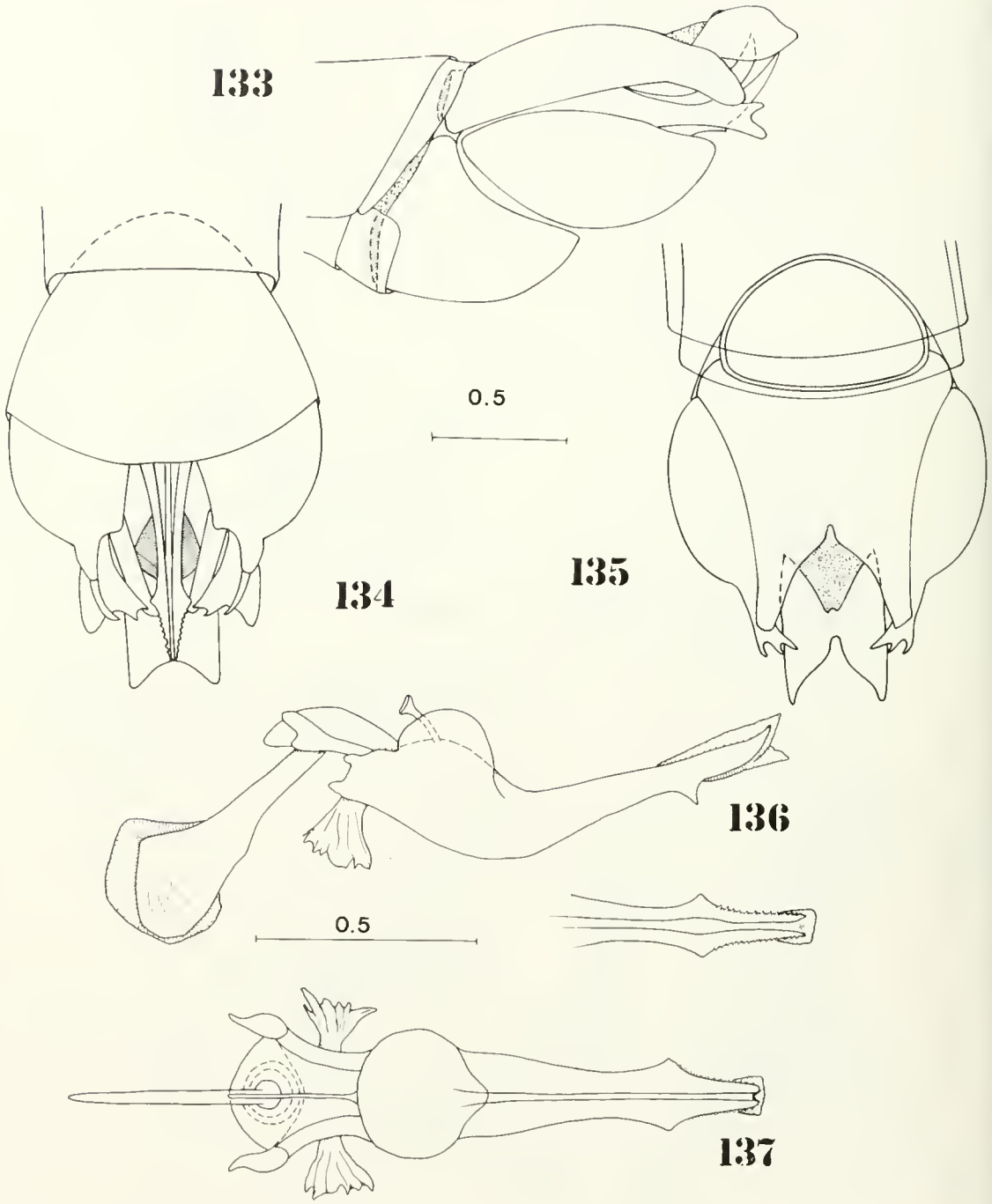
Figs. 119-123. *Cleptomyia tripartita* (Walker): 119-121, male terminalia, lateral, ventral and dorsal views; 122-123, aedeagus in lateral and dorsal views.



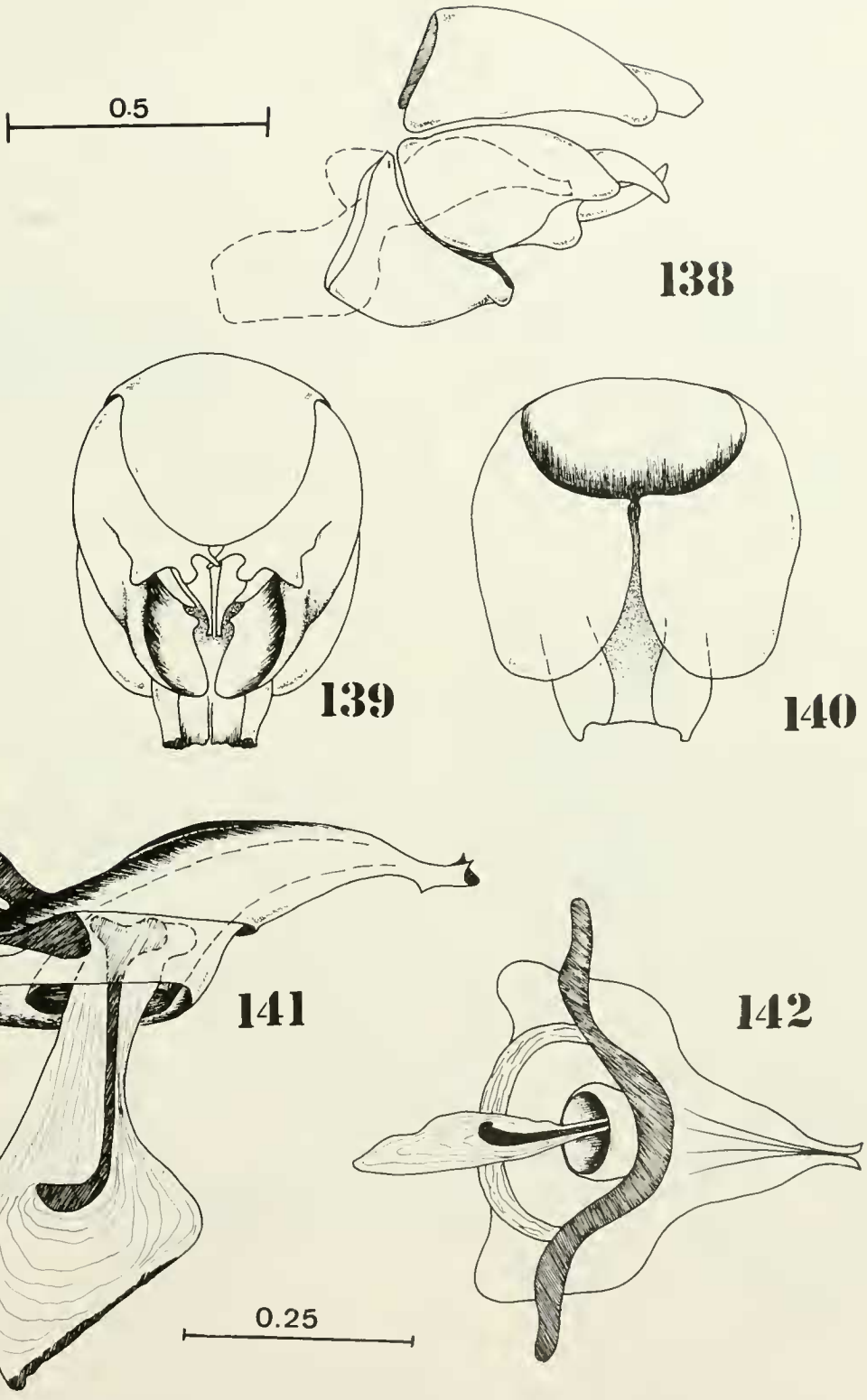
FIGS. 124-127. *Macrocolus bicolor* Engel: 124, head, lateral; 125, antenna; 127, spermathecae. *M. martinorum* sp. n.: 126, male terminalia, lateral.



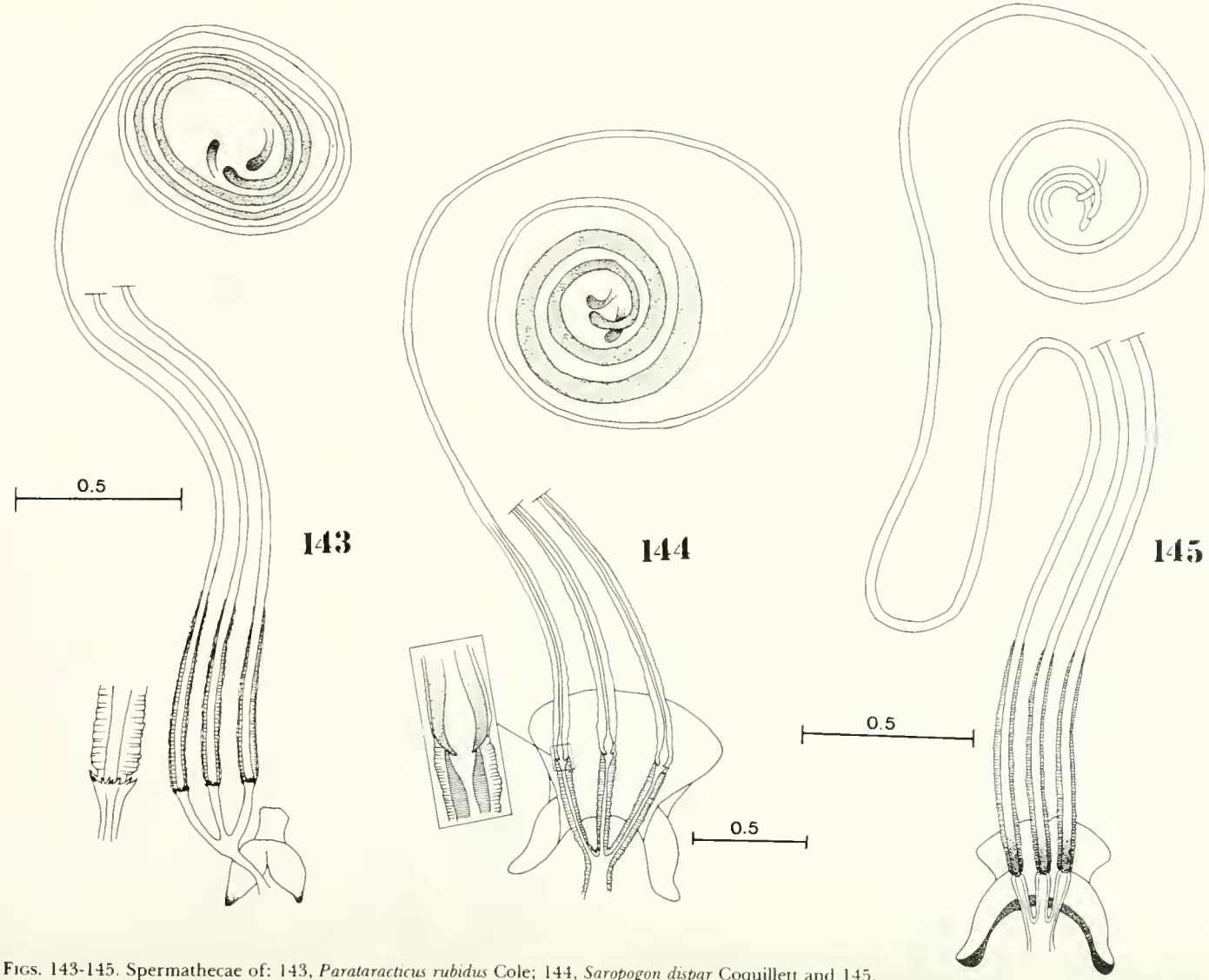
Figs. 128-132. *Macrocolus bicolor* Engel: 128-130, male terminalia, lateral, ventral and dorsal views; 131-132, aedeagus in lateral and dorsal views.



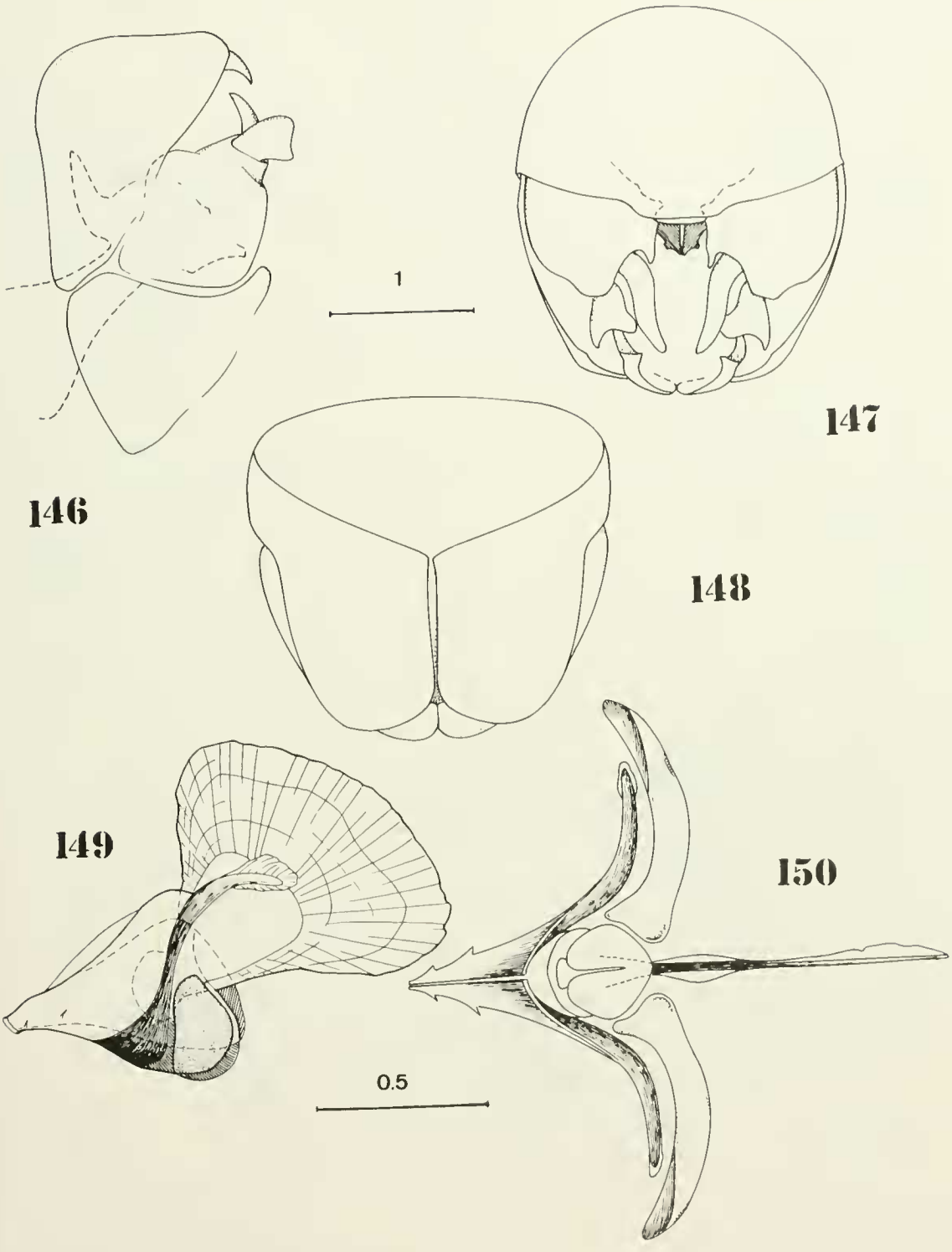
Figs. 133-137. *Neoderomyia fulvipes* (Philippi): 133-135, male terminalia, lateral, ventral and dorsal views; 136-137, aedeagus in lateral and dorsal views.



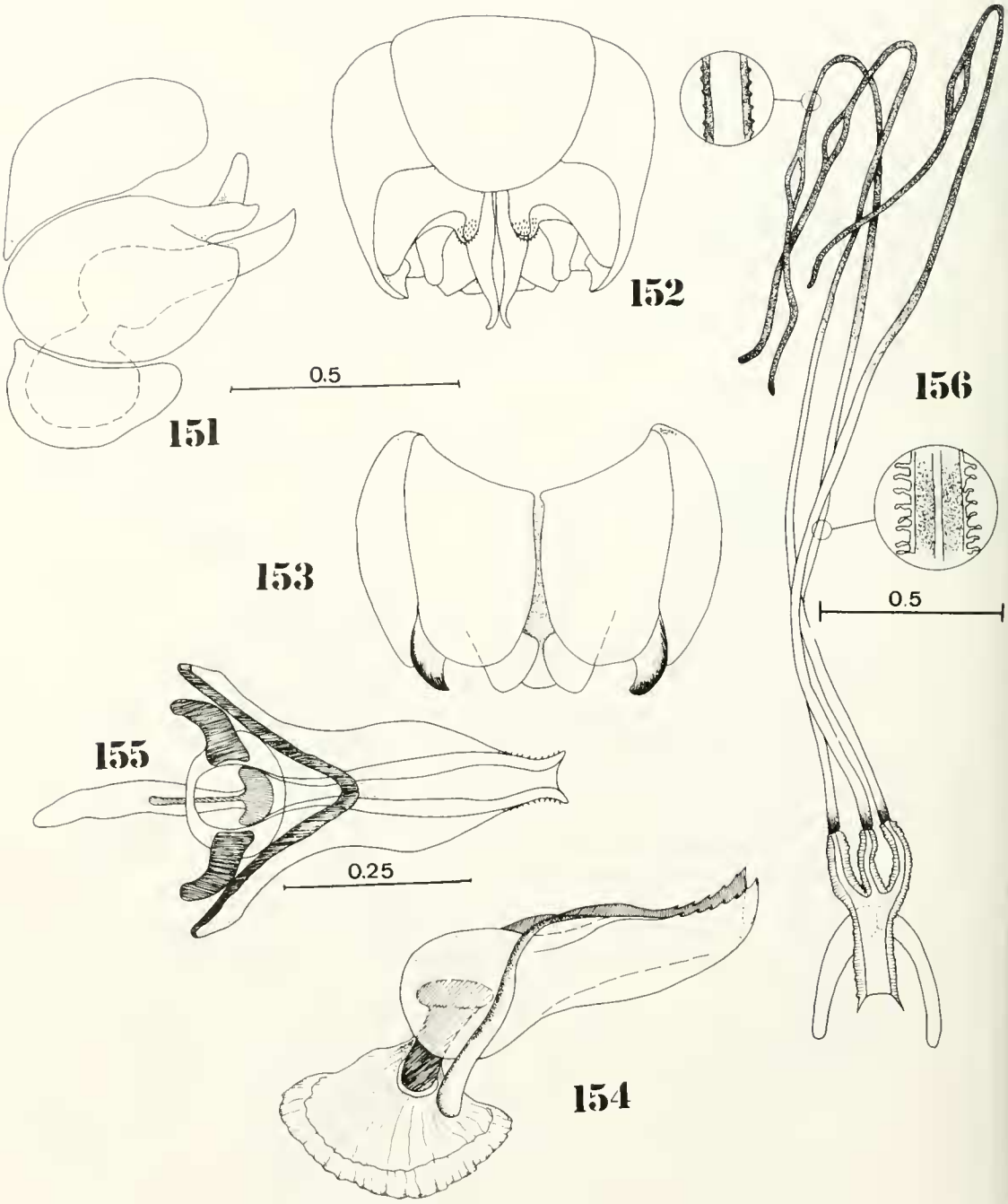
Figs. 138-142. *Parataracticus rubidus* Cole: 138-140, male terminalia, lateral, ventral and dorsal views; 141-142, aedeagus in lateral and dorsal views.



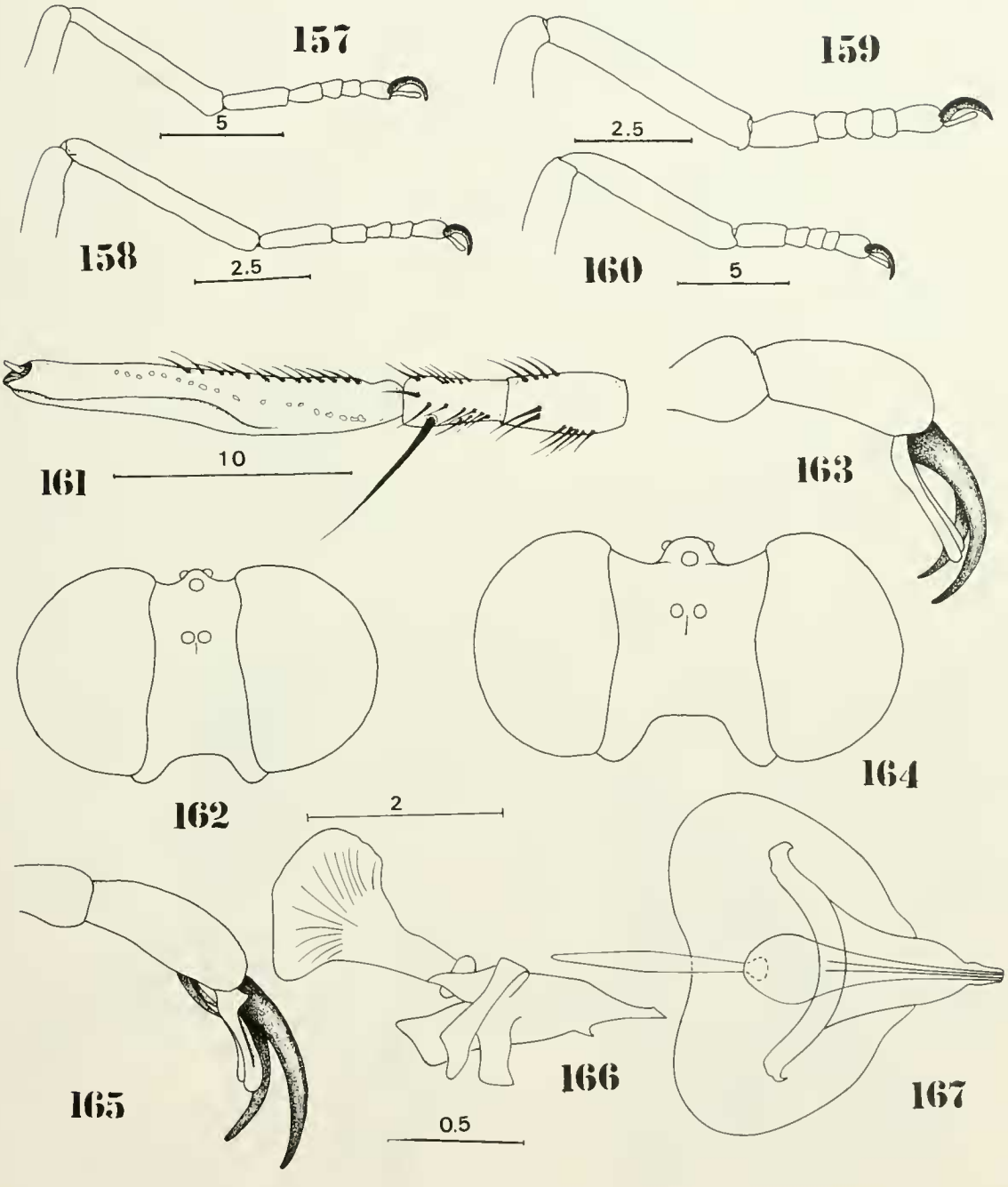
FIGS. 143-145. Spermathecae of: 143, *Parataracticus rubidus* Cole; 144, *Saropogon dispar* Coquillett and 145, *Saropogon luteus* Coquillett.



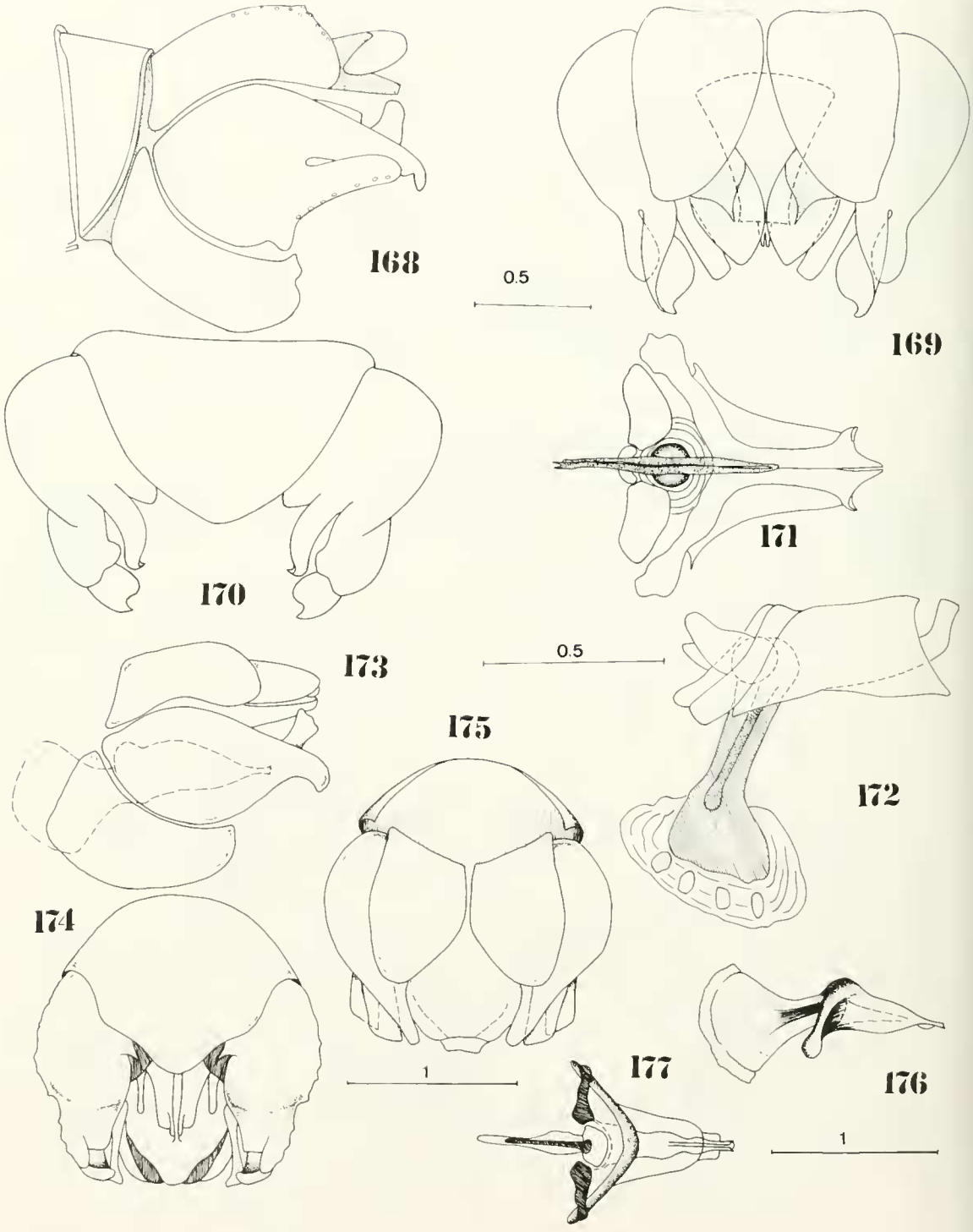
Figs. 146-150. *Saropogon dispar* Coquillett: 146-148, male terminalia, lateral, ventral and dorsal views. 149-150, aedeagus in lateral and dorsal views.



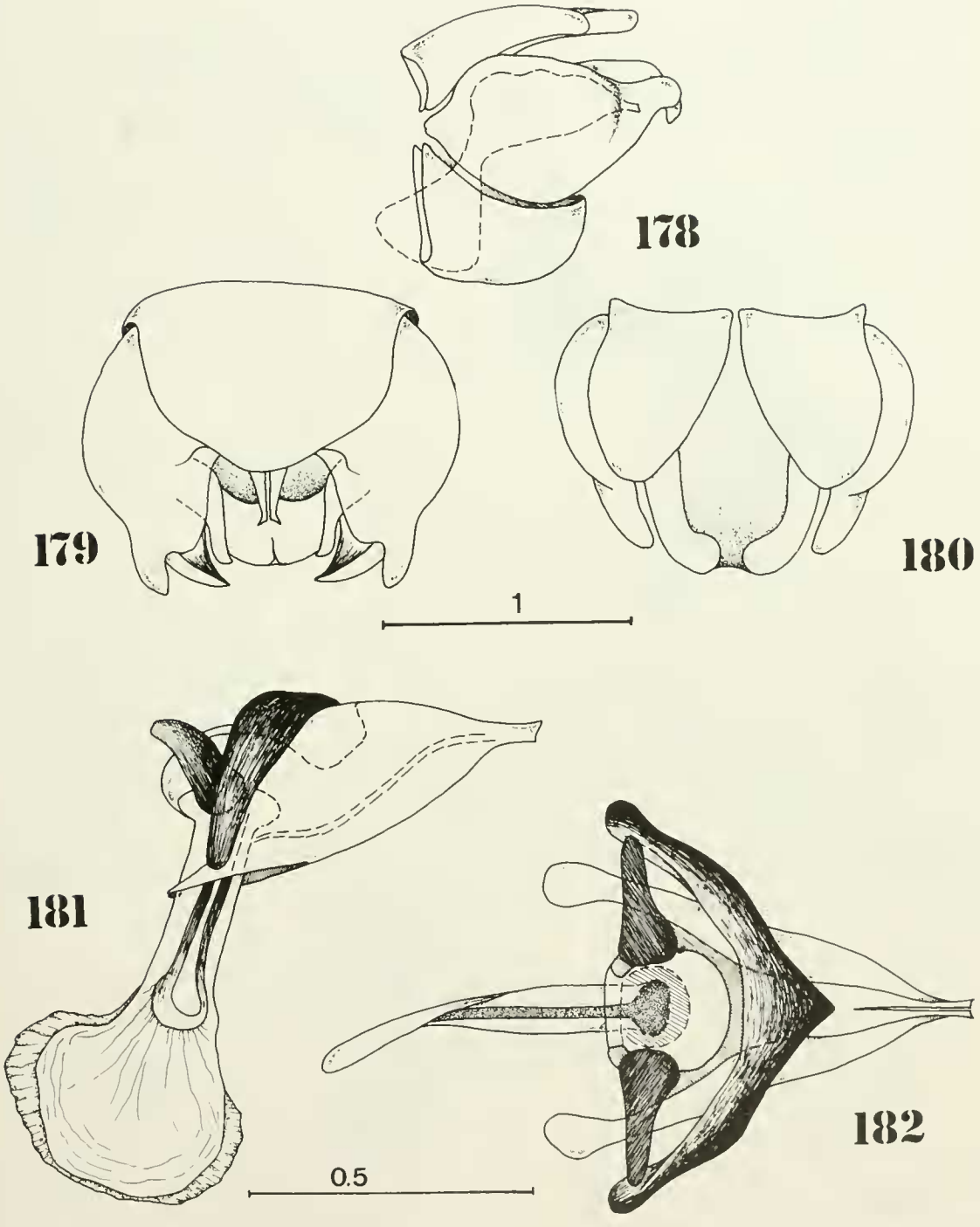
FIGS. 151-156. *Taracticus octopunctatus* (Say): 151-153, male terminalia, lateral, ventral and dorsal views; 154-155, aedeagus in lateral and dorsal views; 156, spermathecae.



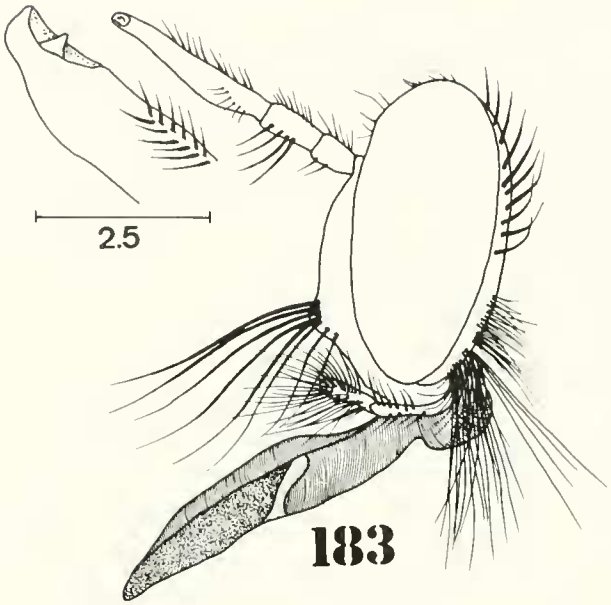
Figs. 157-167. Hind leg of: 157, *Neodiogmites hirtuosus* (Wiedemann); 158, *Neodiogmites mixtus* Carrera; 159, *Lastaurina travassosi* (Carrera) and 160, *Lastaurus lugubris* (Macquart). Fig. 161, antenna of *Lastaurus robustus* Carrera; 162-163, head and hind basal tarsomere of *Diogmites vulgaris* Carrera; 164-165, do., *Allopogon tesellatus* (Wiedemann). Aedeagus of *Allopogon vittatus*(Wiedemann): lateral (166) and dorsal (167) views.

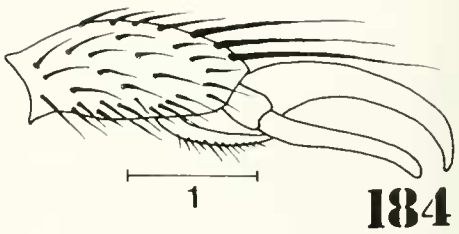


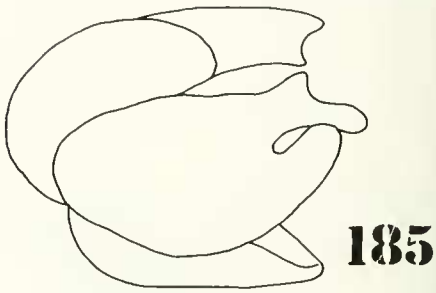
Figs. 168-177. *Blepharepium fuscipennis* (Macquart): 168-170, male terminalia, lateral, ventral and dorsal views; 171-172, aedeagus in dorsal and lateral views. *Diogmites ferrugineus* (Lynch Arribálzaga): 173-175, male terminalia, lateral, ventral and dorsal views; 176-177, aedeagus in lateral and dorsal views.

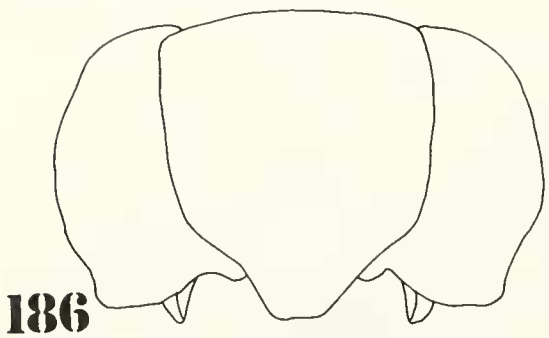


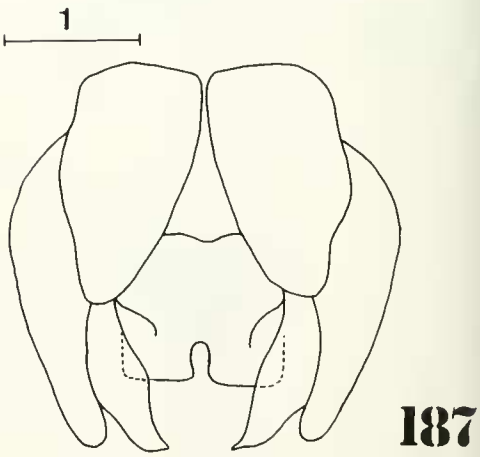
Figs. 178-182. *Lastaurina ardens* (Wiedemann): 178-180, male terminalia, lateral, ventral and dorsal views; 181-182, aedeagus, lateral and dorsal views.

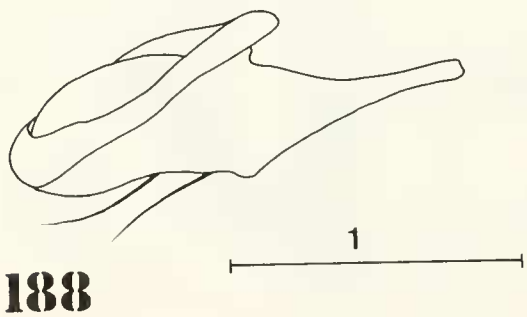


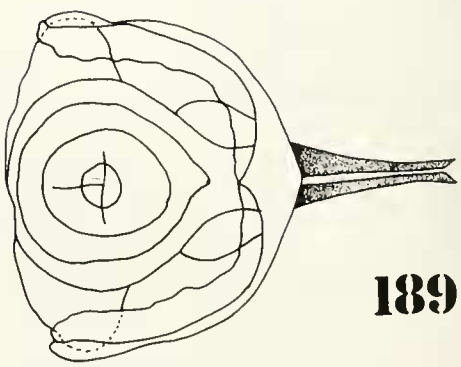




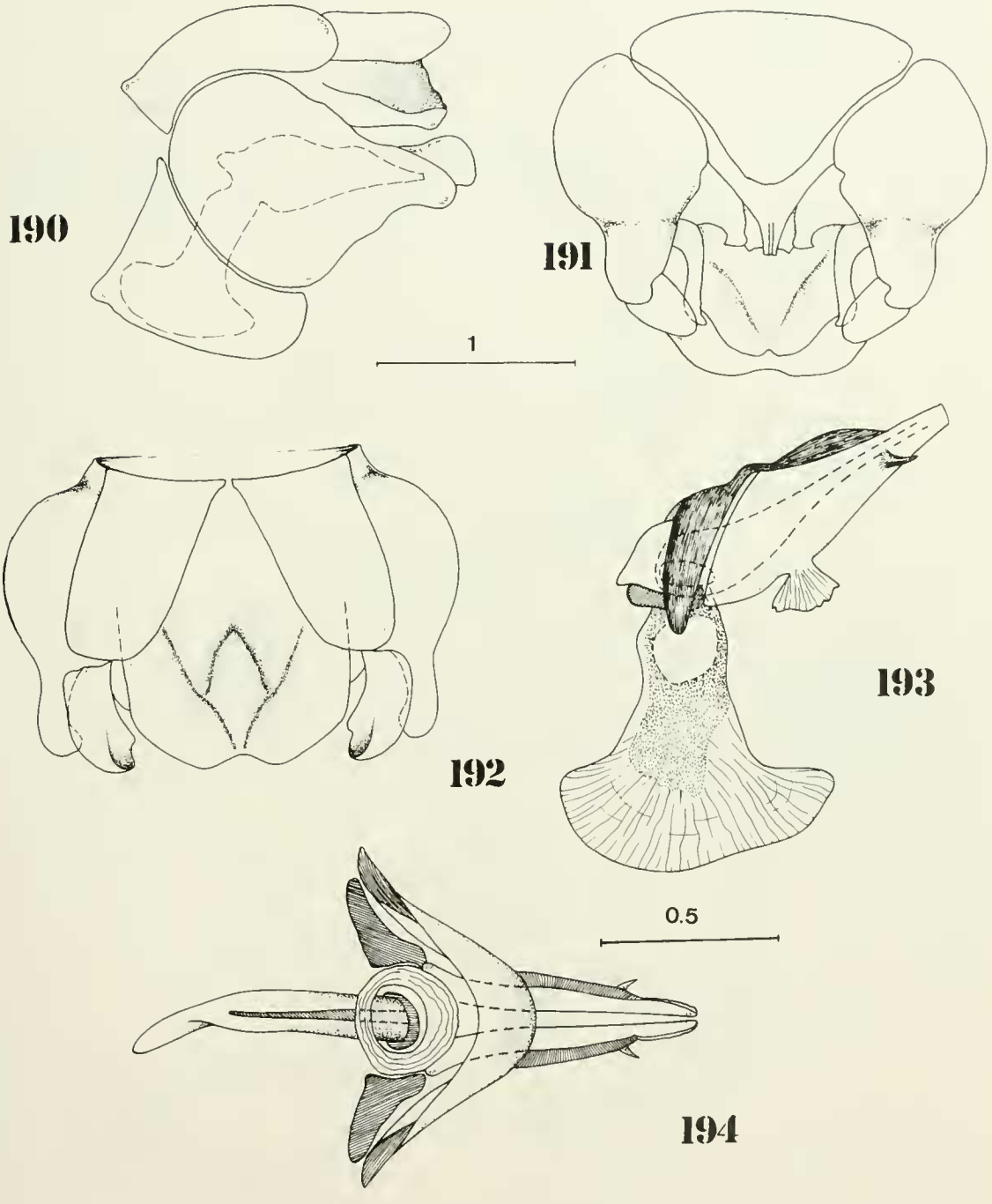




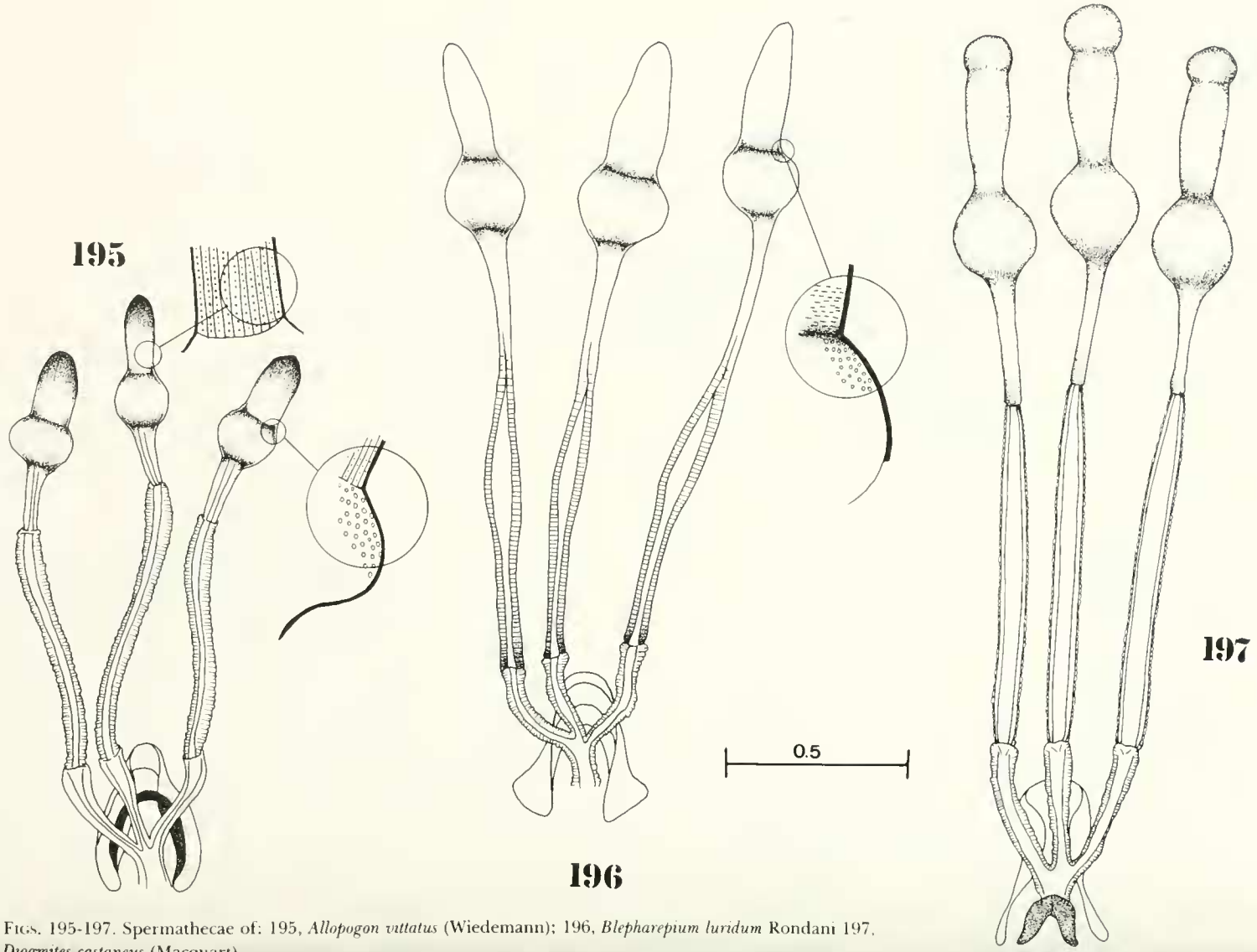




FIGS. 183-189. *Neodiogmites carrerai* sp. n.: 183, head; 184, tarsomere; 185-187, male terminalia, lateral, dorsal and ventral views; 188-189, aedeagus in lateral and dorsal views.



Figs. 190-194. *Lastaurus fallax* (Macquart): 190-192, male terminalia, lateral, ventral and dorsal views; 193-194, aedeagus in lateral and dorsal views.



FIGS. 195-197. Spermathecae of: 195, *Allopogon vittatus* (Wiedemann); 196, *Blepharepium luridum* Rondani 197, *Diogmites castaneus* (Macquart).

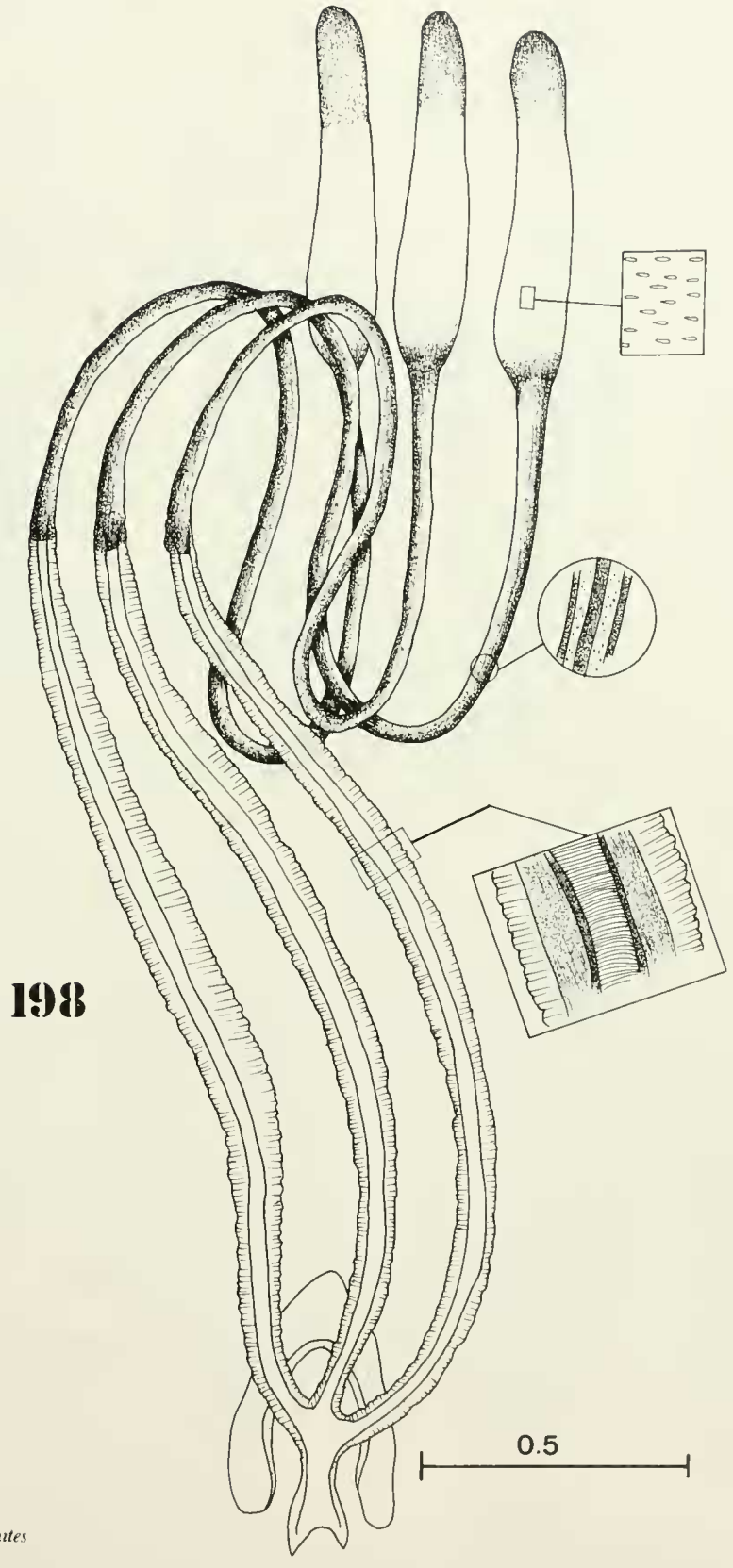
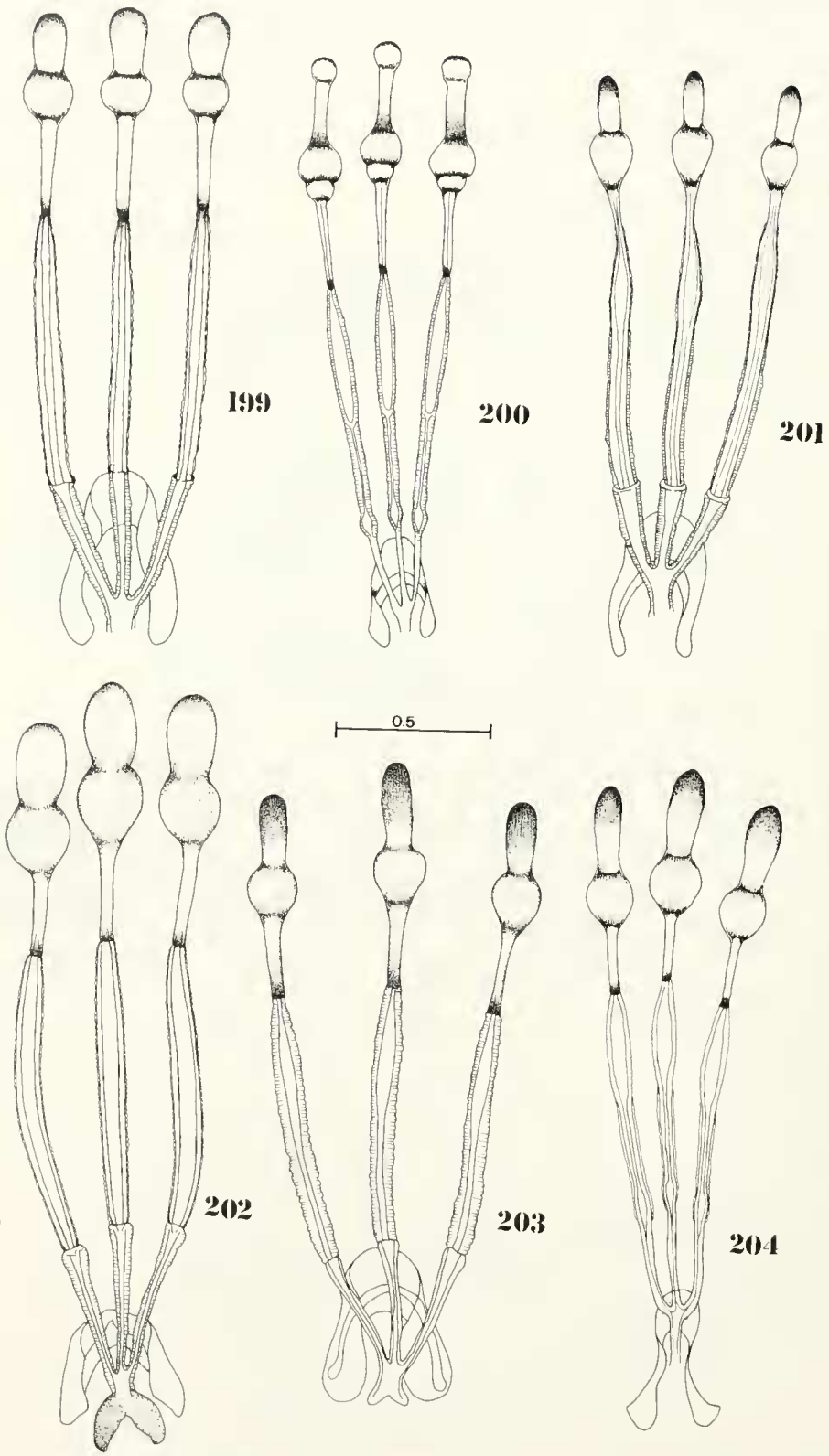
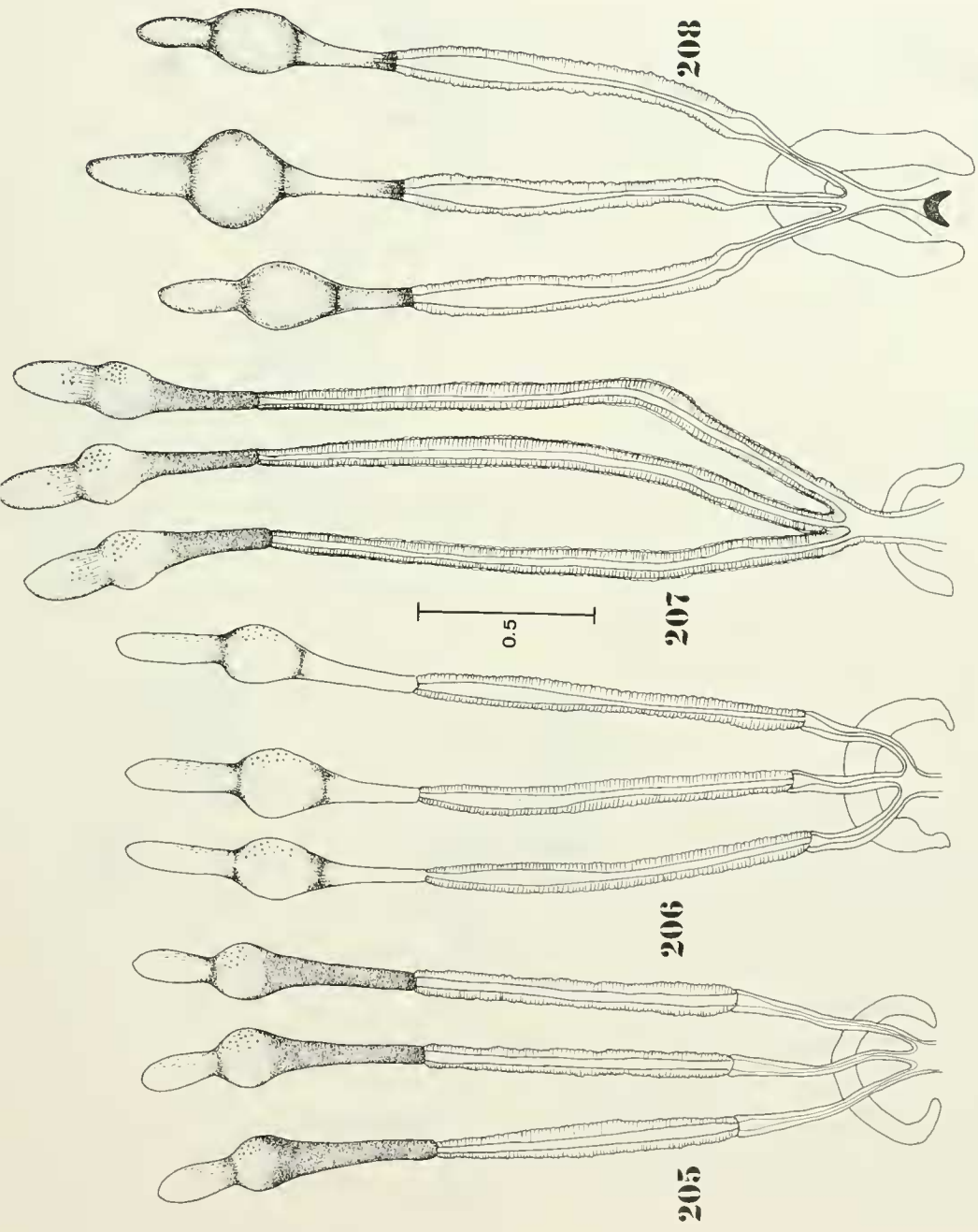


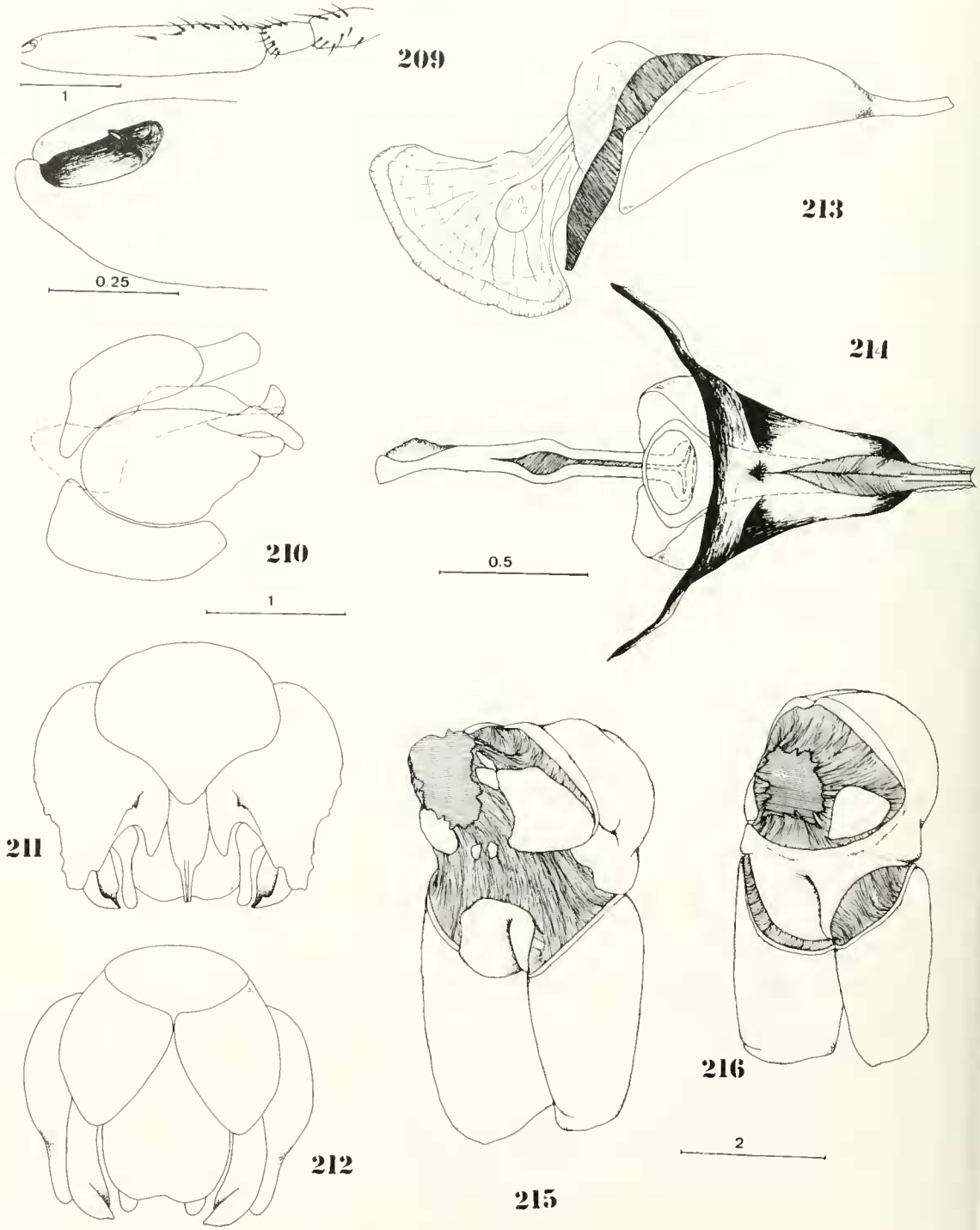
Fig. 198. Spermathecae of *Diogmites ferrugineus* (Lynch Arribálzaga).



FIGS. 199-204. Spermathecae of: 199, *Diogmites: D. coffeatus* (Wiedemann); 200, *D. jubatus* (auctt); 201, *D. discolor* Loew; 202, *D. symmachus* Loew; 203, *D. basalis* (Walker) and 204, *D. winthemi* (Wiedemann).



Figs. 205-208. Spermathecae of: 205, *Lastaurina ardens* (Wiedemann); 206, *Neodiogmites alexanderi* Carrera; 207, *Lastaurus lugubris* (Macquart) and 208, *Phonicocleptes busiris* Lynch Arribálzaga.



Figs. 209-216. *Phonicocleptes longipes* (Macquart): 209, antenna, detail. *P. busiris* Lynch Arribálzaga: 210-212, male terminalia, lateral, ventral and dorsal views; 213-214, aedeagus in lateral and dorsal views. Prosternum: 215, *Phonicocleptes longipes* (Macquart); 216, *Blepharepium cajennense* (Fabricius).